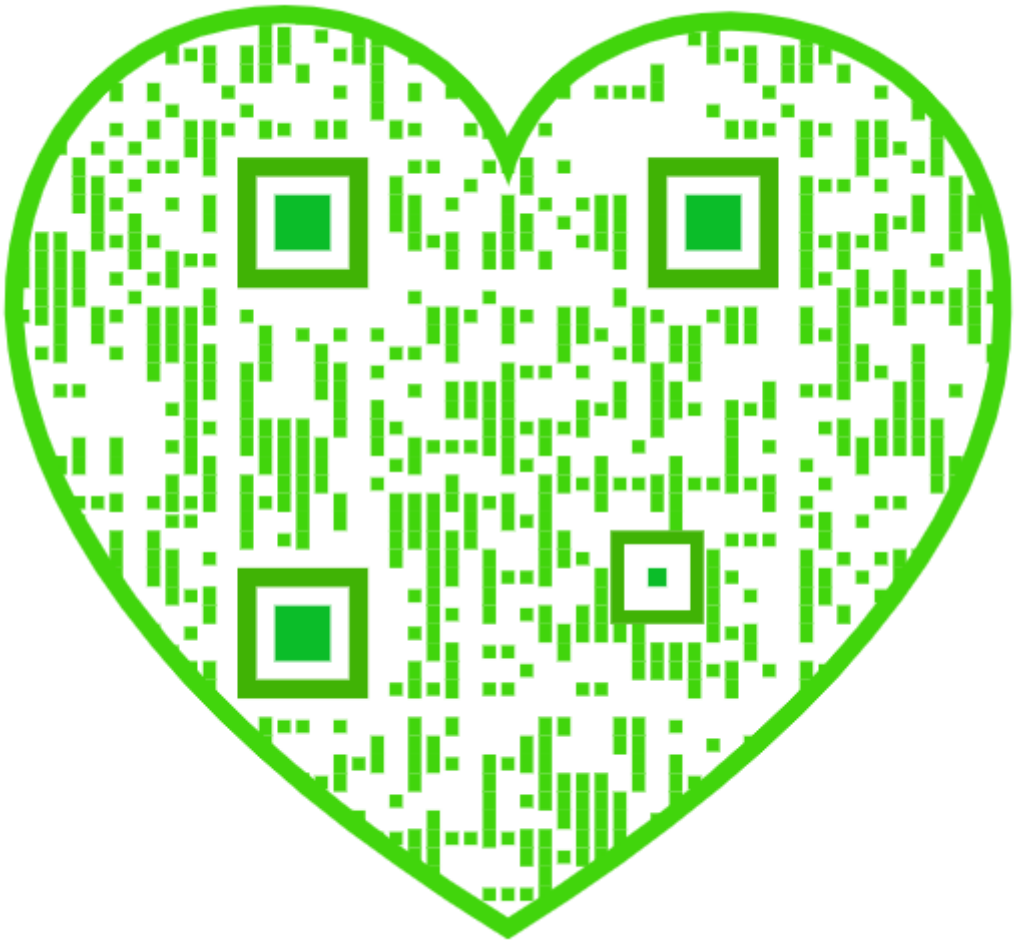

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Vol. 204 No. 1

ARCHITECT AND ENGINEER

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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EDITORIAL NOTES

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ART DEPARTMENT

HOUSING ACTIVITY CONTINUES

Expenditures for new private homebuilding will probably set another all time record next year, even higher than the 14.6-billion record that U. S. Commerce and Labor Department experts now expect will be set for this year.

The number of new private houses started in 1956 will probably decline slightly to about 1,250,000 units, compared with an estimated 1,300,000 new starts for this year, and 1,352,000 starts in the peak numerical volume year of 1950. This year's spending will top last year's $12.1-billion record by about $2.5-billion, and the old 1950 dollar volume record by more than $3-billion.

Except for some uncertainties in the housing credit situation, the experts all agree that there are as many reasons for believing next year's new housing starts will equal this year's, and that due to the public's desire for more spacious houses the total expenditure for new homes could rise $100-million in 1956.

According to a VA survey released in mid-summer, the purchasing power of the average family is increasing rapidly and the average no-down payment VA home buyer had liquid savings of over $900, which he might draw on for a down payment on his home if such were necessary.

Thus in spite of the government's recent anti-inflation housing credit curbs, present indications point to an excellent year in the home construction industry for 1956.

* * *

Interior Secretary McKay recently observed that "The best examples of good conservation can be found, in the main, on private lands."

* * *

REPORT ON EDUCATION CONFERENCE

A study of final reports developed during the White House Conference on Education, compared with various accounts of Conference conclusions, discloses that the delegates' views were subject to curious interpretations in wide segments of the nation's press.

The much heralded "Two to One Endorsement of Federal Aid," reported on December 1 as a finding of the Conference, actually was a very restricted recommendation when viewed alongside the recommendation of the previous day, which stated flatly that "the general consensus was that no state represented has demonstrated financial incapacity to build the schools it will need during the next five years."

The later recommendation for federal aid was conditioned on the idea that any states and territories receiving it "should be granted this aid only on the basis of demonstrated needs."

Tying together these reports the Conference virtually said, "The need has not been demonstrated, but if and when it is, federal assistance should be forthcoming."

This measures up almost exactly with the Eisenhower Administration's proposal of last year that 1) Bonds be purchased from local school districts; 2) that assistance be given in setting up school building authorities; 3) that limited grants be given to enable school districts to qualify in the loan or state building authority programs—if the need for such assistance was demonstrated by the local district and endorsed by the state to the federal agency.

The school problem will continue to grow and constructive solution of the needs of educational facilities will require a great deal of honest and sincere thinking and lots of hard work.

* * *

1819 days or about 6½ million manhours have been worked without a disabling injury by employees of General Electric's Laminated and Insulating Products Department at Coshocton, Ohio.

* * *

GIVE THE TAXPAYER A BREAK!

One of the most tenacious of economic misconceptions is the notion that only government spending can sustain prosperity.

Factually, however, since June 1953, Federal spending has dropped $15.6 billion—from 16.5 to 11.6 per cent of the gross national product.

According to government-spending advocates, that should have produced economic disaster. But, as everyone knows, the nation is enjoying the greatest prosperity in history.

During this two and one-half year period, spending by consumers increased $25.1 billion and private investment by $5.7 billion, a total increase of $30.8 billion, representing an increase from 77 to 81 per cent of the gross national product.

It is this confidence of the consumer and investor which created our prosperity. In fact, consumer spending limited the 1953-54 business decline as it increased by $3.7 billion while other areas of expenditure were dropping.

Private investment is now running at the annual rate of $60.7 billion. That is $13.8 billion, or 29 per cent, above the rate for the second quarter of 1954.

Reduction of taxes, by reduced government spending, will enable private enterprise to still further advance the national economy.

Reynowall movable partitions add dignity and beauty to these modern offices of the well-known contractor firm: Morrison-Knudsen Company, Incorporated.

Something new and flexible has happened to movable partitions!

Reynowall

Aluminum Movable Partition Systems

Here's the newest concept in economical metal partitions...strong, rigid, beautiful Reynowall! This system provides complete flexibility to meet any present plan and all future modifications. Simplicity of design assures fast installation and easy relocation. Cornice and ceiling-high partitions can be quickly cut down to lower height. Glazed railing units can be modified to low railing heights. All cutting can be done on the job. You plan with six unit types, from 42½" railing height to 9'2¼" solid or glazed partition. Each type is designed to use modules 36", 42" and 48" wide. Six standard baked-on colors, hammer-embossed or leather-grain finish. For complete data on Reynowall write to... **Reynolds Metals Company,** 2080 S. Ninth St., Louisville 1, Ky.

Framing members are strong, fluted aluminum extrusions. Panels are rigid, tray-like assemblies of embossed aluminum bonded to resin-impregnated kraft honeycomb cores. Maximum overall partition thickness, 2"—saves floor space. Provision for electrical wiring facilities within the partition members.

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BUILDING PRODUCTS

See "FRONTIER," Reynolds great dramatic series, Sundays, NBC-TV Network.

NEWS and COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., has announced a special group of exhibitions and events for January, including:

EXHIBITS—California Watercolor Society, 35th Annual exhibition. This outstanding exhibit comes to San Francisco following its initial showing at the Long Beach Municipal Art Center; Paintings by Walter Kuhlman; Paintings by Allie Bargum Hyde; and Watercolors by Paula Palmer.

The Aschenbach Foundation for Graphic Arts exhibit at the Museum includes Serigraphs by Sister Mary Corita, I.H.M., and Nicholas Dunphy, a Commemorative Exhibition; On Loan Exhibition at the San Francisco Public Library: Prints from the Immaculate Heart College, and A Study of Currier and Ives.

Special Events—Organ recital each Saturday and Sunday at 3 o'clock.

The Museum is open daily.

PORTLAND ART MUSEUM

Thomas C. Colt, Jr., director of the Portland Art Museum, West Park and Madison, announces an exhibition of recent Paintings by Louis Bunce will be shown through January. Also exhibited during the month will be Oregon Photography 1956; Photographs by Alfred Eisenstaedt; Drawings and Prints by Leonard Baskin; and among special activities will be the Second All-Mozart Concert in the Sculpture Court, January 9th, and a Preview for exhibitions on February 13th.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, will present an Exhibition of water colors by Muriel Branegan Bacon, George Post, Avrum Rubenstein, and Richard Stephens during the month of January.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, will open the new year with special exhibitions from the Permanent Collection; items from the Albert M. Bender Collection; Younger American Painters, selected by the Salmon R. Guggenheim Museum; and a continuation of the 19th Annual Drawings and Print Exhibition of the San Francisco Art Association.

Special Events include Concerts and programs; lecture tours based upon the exhibitions: Adventures in Drawing and Painting; the Studio—Art for the Layman; and the Children's Saturday morning art classes from 10 to 11 for children from 6 to 14 years.

The Museum is open daily.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering an outstanding exhibition of German Drawings and Masterpieces from Five Centuries during January. Included are 153 outstanding Drawings selected from the Great Public Collections of Germany, the Print Cabinets of Berlin, Munich, Nuremberg, Cologne, as well as from Private Collections. The exhibit is sponsored by the Federal Republic of Germany.

To complement and enhance the scope of the major exhibition some important German Paintings and Sculpture have been generously lent to the Museum, primarily from the National Gallery in Washington, D.C., and the Kress Foundation.

Other exhibits will include Sculptures in Silver from the Islands of Time, sponsored by the Towle Silversmiths; and Into the Child's World with the Sixth Annual San Francisco Young Children's Art Show.

Special Events—For adults, Exercises in Clay Modeling and Oil Paintings; Painting Workshop for Amateurs; Seminars in the History of Art; Sunday Lectures; and for the children, Picture Making, Art and Nature and the Art Club.

The Museum is open daily.

ARCHITECT & ENGINEER MAGAZINE PUBLISHED ON UNIQUE COVER PAPER THIS MONTH

This January 1956 issue of ARCHITECT & ENGINEER magazine, in keeping with today's trends in the construction industry to offer something new in the way of a product, is printed on aluminum foil laminated to a 10 point coated cover stock of paper.

Aluminum foil has developed a new dramatic dimension quality into the field of advertising and publishing and because of its unique surface, aluminum foil guarantees attention and enhances the design printed on it, as can be seen by the completeness with which details of the newly completed Reynolds Met-

(See Page 33)

"Been settin' here, wettin' this fool stick for twenty years—and she ain't rotted yet." Paul Bunyan threw down the 12x12 Chemonited timber in defeat. His disgusted sigh flattened 30 acres of prime Douglas fir. "Yessir, Babe, I been suckered again by a city slicker. That Baxter man bet me a year's free loggin' to a month in Frisco that that there stick would never rot—even in moist ground. On account of this new fangled presarvative, Chemonite ... Well come on, you lazy Blue Ox, let's get haulin' ..."

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RECOMMENDED USES: *Building Foundations ... Bridge Timbers ... Wharf Timbers ... Fence Posts ... Septic Tanks ... wherever wood is exposed to decay or insect attack.*

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120 Montgomery Street, San Francisco 4, California

The New 3325 WILSHIRE BUILDING

Los Angeles, California

By DON L. GEISERT*

TOTAL GROSS AREA
232,646 SQUARE FEET

VICTOR GRUEN, A.I.A.
ARCHITECT

ELEVATION, showing harizontal sunshades. Vertical louvers indicated as projected beyond wall of building. Glass walls surround each floor. Floors are concrete poured on corrugated metal forms.

CLOSE-UP OF ELEVATION

Showing the sunshades, and illustrating the vertical louvers angled to protect against heat and sun. Parking with under-cover access to building is also shown.

ALUMINUM ELEGANCE

Ever since the Romans revised the classic forms of architecture, first conceived by the Greeks, each succeeding generation of man and all races of people have endeavored to embellish or delete aesthetic features adding or detracting from the completed structure.

This fevered search for something new, different, less expensive, or more expressive, has produced some noteworthy examples of design which have endured for generations. Unfortunately, the quest has also produced many grotesque examples which serve as a monument to the mistakes of man.

One of the most promising innovations in both architecture and building technique has been the new curtain wall type of construction. Strangely enough, the concept of prefabricated modular metal wall panels goes back to the turn of the century, but only in recent years has the acceptance reached universal proportions.

The best example of this type of construction is the new 3325 Wilshire Building in Los Angeles. Seldom has a multi-storied office building shown such stimulating design features. Through the wizardry of metallurgy, the skill of the architect, and the foresight of the owners, the new Tishman Building deviates completely from the drab standards of the past and offers comfort and convenience to the tenants and visitors hardly imagined, let alone accepted, a few short years ago.

One of the many exciting features of this new office building is that, in effect, it is of double metal skin construction. One skin is of the conventional metal wall panels, as they are known today; and the second is an ingenious arrangement of vertical aluminum louvers on the east and west exposures with horizontal eyebrows on the north and south exposures, which afford complete relief from the solar heat so prevalent when large glass areas are used.

For the first time is has been proven that the savings in refrigeration load can more than pay for the extra tonnage of aluminum going into the vertical louvers and horizontal sunshades. Other equally fascinating features include a battery of the latest electronic-controlled elevators, a five-level garage which provides parking covering contingencies far beyond any legal requirements imposed by the City of Los Angeles and providing under-cover access from the garage to the building lobby.

Engineering science produced an all-welded structural frame for the building which provides rigid connections between beams, girders, and columns, making it possible to eliminate all structural walls above the basement level since no sheer walls for the upper structure are required. This progressive concept of structural steel framing made possible the use of only 10 pounds of steel per square foot of building compared to 14 pounds per square foot for buildings of a similar nature. Fireproofing of the steel frame is accomplished by means of vericulite plaster pneumatically applied from the inside of the building against a layer of paper-backed metal lath.

The air conditioning plant ranks equally high with engineering achievement of the rest of the structure inasmuch as each suite of offices will provide tailored temperatures according to the whims of the tenants. Conditioned air is conveyed to the office suites by two sets of main ducts, one duct carrying warm air and the other carrying chilled air. Blending of the two by means of mixing dampers will provide any temperature desired by the occupant. Such flexibility of air conditioning has until recently been considered a prohibitive luxury.

Certainly this is one building which will afford not only maximum comfort to all those within its four walls but will stand as a monument to the ingenuity of man and the integration of the various engineering sciences. Nor has all this aluminum elegance been achieved at prohibitive cost, because in spite of the marvels of utility and convenience incorporated in the building and the beauty and dignity of the over-all structure, it was mandatory that the capital expenditure be held at such level that lease returns would amortize the cost in the allowable depreciation period.

Within view of the famous Ambassador Hotel and other equally outstanding buildings on Wilshire Boulevard, the new 3325 Wilshire Building will be able to assume its rightful role as queen of the area.

EDITOR'S NOTE: The author, Don L. Geisert, is Western Sales Manager of the Metal Wall Division of the Kawneer Company, with general sales offices in Berkeley, California.

WASHINGTON STATE CHAPTER ARCHITECTS NEW SECRETARY

Beginning January 30, 1956, the Central Building offices of the Washington State Chapter of the American Institute of Architects, Inc., will be in charge of a new executive secretary, Miss Gwen Myer of Seattle, graduate of the University of Washington. Miss Myer will replace Miss Dayis Holcomb, who has been employed by the professional organization since August, 1953, as its first full-time executive secretary.

Miss Holcomb, who received her degree from the University of Washington in 1951, has resigned her position in order to travel abroad. She will depart February 5 for study in France and an indefinite stay on the Continent.

CALAVERAS CEMENT PLANT expansion is several months ahead of scheduled completion date, according to Wallace Mein, Jr., president. The $4,000,000 plant was originally scheduled for completion by the end of 1956.

TERRA LINDA . . . Eichler Residential Development, Marin County. A. Quincy Jones and Frederick E. Emmons, Architects, A.I.A.

BETTER LIVING

MANUFACTURERS DEVELOP NEW PRODUCTS FOR GREATER CONSTRUCTION YEARS TO COME

Present and future demands for housing individual families as well as the foreseeable growth of industry and commerce throughout the nation and the Pacific Coast in particular, point towards a substantially bigger building volume for years ahead. Any temporary statistical predictions that actual 1956 housing starts may be smaller in number than the record breaking figures of 1955 are, at this point, rather unrealistic when considered in terms of population growth, new

Joseph L. Eichler, president, Eichler Homes, Palto Alto, one of the pioneers in the use of design featuring sliding glass doors in merchant-builder homes. Once considered a luxury feature of custom-built homes, sliding doors are now a forward-looking feature and convenience to the modern family.

family starts, and shifting of populace from one area to another. Many leaders of industry have already announced long-range plans for new plant construction that assure a great growth of the construction industry, which in turn reflects the widespread development of building products which will be used in the realization of these many buildings.

These facts, based upon several government and private industry surveys, indicate an important and basic fact that will benefit architects, engineers, builders, construction firms and the ultimate user of residential, industrial and commercial buildings.

The construction industry will advance in methods, skills and products by the national growth predicted during the next decade because of another highly important factor.

Many manufacturers and producers of building products are spending vast sums in research programs in an effort to improve their products and keep up with the designers of new construction. Manufacturers are spending more research dollars than ever before in history, and from these scientific laboratories flow a continuous volume of new products to meet new design, and new concepts of human preservation in a fast moving era of potential world catastrophe.

One outstanding example of such an engineering development which has grown at an extraordinarily rapid pace during the past few years is the sliding glass door industry.

Primarily a factor in greater living comfort when applied to homes, and a health and psychological factor when applied to industrial and commercial usage, sliding glass doors in major construction design are the result of engineering progress, and are one of the few phases of advancement in the construction industry that have resulted in an ultimate lowering of a

THE PORTUGUESE BEND CLUB utilizes wall of sliding glass doors as only separation between club facilities and the ocean itself. Tight weatherstripping on doors provides protection against ocean breeze during cool days, but preserves view for maximum enjoyment. Kenneth Neptune, Architect, A.I.A.

product price rather than an increase. This factor has also had a great deal to do with progress in the sliding glass door industry and acceptance by the public.

Among more recent progress in this field is the advent of the aluminum sliding door, largely pioneered by West Coast manufacturers whose engineers were able to apply knowledge gained from the aviation industry and apply it to civilian construction to meet rigid building code requirements and specifications of the architects, designers and builders who recognized in sliding glass doors a new vista of possibilities in all types of construction.

Use of sliding glass doors is no longer limited to "custom construction," but is applicable to practically all building.

RAIN OR SHINE. Sliding doors are wool pile weatherstripped and silicoting treated to provide maximum resistance against abrasion, rain and wind.

OUTDOOR CLASSROOM—Compton Junior College classroom shows schools are particularly adapted to the new trend in architecturol design which invites the outdoors inside. By providing a wall of sliding doors, as shown, students may study outside as well as inside during warm weather. Light provided by the wall of glass is both functional and advantageous from a psychological point of view—there is less eye strain also.

Illustration No. 1 EXECUTIVE AND CLIENT ENTRANCE

NEWLY COMPLETED
EXECUTIVE OFFICES

MORRISON-KNUDSEN COMPANY, INCORPORATED
SAN FRANCISCO, CALIFORNIA

BOLTON WHITE and JACK HERMAN
ARCHITECTS
And Technical Advisors

EXECUTIVE OFFICES . . .

Illustration No. 2

INTERIOR—lobby entrance to executive offices and receptionist - telephones area.

By TOM GREENE

Interior Planning Consultant

Morrison-Knudsen Company, Incorporated, General Contractors and Engineers, recently expanded because of a world wide growth their San Francisco Office of Executive, Purchasing, Accounting, Estimating, Traffic and Engineering in the New Equitable Life Assurance Society Building. This move was some six months in the planning stage. The desire to have the most modern and efficient operating headquarters for a general contractor of this size was the goal. Basically, they had two major problems to solve in the move —how to divide the area for maximum efficiency, and what to divide the areas with.

How to divide the floor area of a contracting organization of this magnitude is interesting as shown in the floor plan. Morrison-Knudsen Company, Incorporated (white area shown in the plan) had extensive traffic

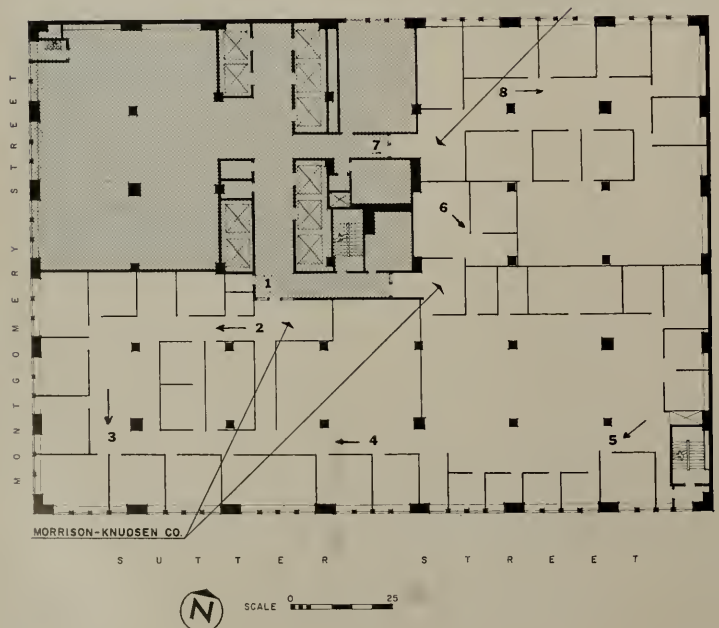

ILLUSTRATION PLAN

Key number identification: The various illustrations shown in this article are in the general location indicated by corresponding numbers.

PLAN DRAWING

Courtesy Bolton White and Jack Herman, Architects.

and cross traffic of personnel and paper for which to plan. World wide building contracts are controlled at this office. So you can see that privacy of departments, switchboard, traffic of salesmen to all departments, purchasing, accounting, personnel and sub-contractors into various departments including estimating, would all be conflicting without proper space division.

There existed a problem of separating the Executive and Client entry and departure from the continuous transient traffic. When contracts are being negotiated or bids are being compiled, detachment from the other continuous daily operations is necessary to preserve the confidential nature of the business and maintain ready cross flow of information in the bidding areas. Note on the plan (illustrations Nos. 2, 3, 4 and 5) how these problems have resolved themselves into a simple traffic pattern.

The three lobbies off the main elevator corridors separate functions with minimum loss of corridor space. The Executive-Client entrance (illustration No. 1, page 13) also provides for the semi-private switchboard. The operators act as receptionists and handle the world-wide phones. Traffic to the conference room,

Illustration No. 4

OFFICE MANAGER'S AREA—looking towards the executive offices.

MORRISON-KNUDSEN executive offices at end of hallway. Receptionist desk in foreground.

Illustration No. 3

Illustration No. 6

Detail of
PERSONNEL
DEPARTMENT
OFFICES

Illustration No. 5

PURCHASING DEPARTMENT OFFICES—
Looking towards executive offices.

Illustration No. 7

GROUP OF OFFICES
Showing flexibility of partitions and spacing of work areas.

Below is shown hallway from the main lobby with administrative and executive offices arranged for utility uses.

Illustration No. 8

executive offices, estimating and office manager works well from this point.

Personnel, Accounting, and Purchasing work off the secondary lobby as shown (illustrations Nos. 5 and 6, page 16). This again gives control to the receptionists in the lobby and eliminates this traffic from the primary lobby. The Personnel Department in this case handles world wide travel coordination of local origin, and local personnel problems. Thus, its space is adequate. Purchasing, by dint of necessary voluminous records, has used its space organically. Buying and expediting is done from the private cubicles and offices. The mail, storage, and reproduction rooms work efficiently from this location. All departments have kept their areas as open as possible to provide even distribution of light and ventilation, yet not losing required privacy. An expansion factor of 20% is incorporated in the space division. This allows for growth or peak work loads and auditing without loss of efficiency by regular department staffs.

The second major problem was what material to use for the dividing walls within the tenant area. As in many cases these days, division of work space, administrative space, and executive space is being defined by modular, movable, metal partitions. This was also the decision of this tenant. Morrison-Knudsen Company, Incorporated wanted a partition system with low maintenance where relocation would be simple and economical; where there was maximum flexibility and simple field erection; and a strong, rigid partition with good finish. Modern appearance would be of prime importance so that the materials of the

CONSTRUCTION DETAILS OF ALUMINUM PANELS AND EXTRUSIONS

Shown here and on the opposite page are four details of the use of aluminum panels and extrusions.

AT LEFT—Close-up view of panel and extrusion, cut and fitted on job.

LIGHTNESS of aluminum panels is shown with single workman handling installation.

metal wall would harmonize with the Equitable Building design and standards of anodized aluminum windows and mullions, satin finish aluminum door hardware, and anodized aluminum, extruded entrance frames.

These requirements were found in an aluminum modular movable partition (illustration No. 4, page 15). Additional advantages were discovered, too. Standard inter-changeable parts permit practically complete re-use of all material. Units installed as cornices or ceiling height partitions could be cut down easily on the job to form a lower height partition, or a glazed railing partition could be cut down to a low railing partition.

All parts could be cut on the job where necessary —quickly and with minimum noise. Special fabrication for changes and non-standard sizes thus are eliminated. Too, the aluminum system requires only occasional washing, which allows maintenance savings.

The modular, movable partitions are fabricated from panels and extrusions. The panels are 1¾" nominal

(See Page 25)

DETAIL

of base electrical wiring.

GENERAL INSTALLATION

Showing basic framing and layout of extrusions and panels. Note door frames in place.

TODAY'S INDUSTRIAL INGENUITY MEETS

A CONSTRUCTION DEMAND

FOR MODERN BUILDING MATERIAL

By H. G. ERSTROM*

The growth of the aluminum industry is one of the most fantastic of any metal and, of course, the problem of finishing this aluminum is equally as fantastic in its growth as that of the use of the metal itself. It may be interesting to note that prior to World War II there were 608,000,000 pounds of aluminum used in prime, recovery and imported supplies, while in 1950 this use had skyrocketed to 2,188,000,000 pounds, and in 1955 the spiral continued upward to 4,000,000,000 pounds being used this year. Of this amount the largest classification percentage — 18.3% — went into building materials alone. It is assumed that in 1960 at least 6 to 7,000,000,000 pounds will be used, and the end is not in sight.

H. G. ERSTROM
Mechanical Engineer

Because of the increased uses and applications for this wonder metal we find that the finishing problems have increased proportionately, and this article suggests some solutions. Aluminum is one of the most corrosion resistant metals known, however, when exposed to sea air and certain chemical fumes it will corrode and therefore should be protected by anodizing.

Specialization

In this day and age every field and every phase of industry and professional life is specialized. We find architects and engineers limiting the field of their activities to certain phases of the architectural and engineering programs because, as specialists in these fields, they feel that they can perform a better service to the ultimate consumer. So it is with the finishing specialist.

Any organization that is specializing in the field of finishing aluminum should be cognizant of every latest development and should make every effort to improve their practices so that the ultimate customer will receive the finest product at the least possible cost. It is very heartily recommended that architects and engineers use the services of such specialists in aluminum finishing when they originally design the building and/or product, as in this way they will be able to take full advantage of this knowledge and incorporate the recommendations in the final specifications.

Types of Prefinishing

There are scores of types of preliminary surface treatments for the aluminum before it is given its protective coating by anodizing. Some of these are cited below, but of course there are many variations to each one of these types which may suit the particular needs and desires of the architect, engineer and ultimate customer.

Buffed Finish—This finish is applied where a highly lustrous finish free from defects is required. The number and type of preliminary polishing steps prior to buffing are dependent upon the condition of the surface to be finished, and abrasive wheels set up with various grades of emery varying from No. 60 to No. 200 are commonly progressively employed. Buffing is then accomplished with muslin or felt wheels and a polishing grease such as Tripoli. Following the buffing operation, a "color buff" may be used, employing a loose unstitched muslin or flannel buff with a compound specially designed for bringing out the high luster in the aluminum.

Ground Finish—Ground finish is normally applied to tubing only and it furnishes a characteristic matte finish resulting from grinding lines around the periph-

*EDITOR'S NOTE: Mr. Erdstrom is a graduate mechanical engineer with a background that includes some fifteen years in handling and finishing aluminum. He operated a large metal shop in the Middle West, and is at present President of Light Metal Processors, Inc., Redwood City, California, specializing entirely in the handling of aluminum finishing and coating steel with aluminum.

ery. This is applied by means of several belt grinding operations with various grades of emery in accordance with the desires of the designer.

Satin Finish—A satin finish gives a texture and luster to a surface which makes it more diffusing than a buffed surface. Such a finish depends upon the formation of fine parallel scratch lines on the surface which, in addition to reducing the specular reflectivity, also breaks up, to a varying degree, any undesirable grain or structural defects. For satin finishing, original polishing is done with wheels using No. 60 to No. 160 emery or its equivalent, with a final satin finish using usually a No. 180 to No. 220 emery which will provide the desired satin appearance.

Polish Finish—A polish finish is normally applied in the same manner as a satin finish with the exception that the final operation is usually carried out with a maximum No. 160 to No. 180 abrasive, this providing a coarser surface finish than any other means.

Sand Blast—Sand blasting produces a uniform matte finish when applied correctly; however, unless great care is taken to assure uniform blasting, a roughened appearance will be produced. There are a variety of sand blast finishes and the degree of roughness produced depends both on the size of abrasive and the pressures used to propel the abrasive. Normally an anodized coating directly over a sand blasted surface without a preliminary etch will produce a grayish color, the darkness of which will depend on both the alloy and the degree of surface roughness.

Caustic Etch—This process is carried out in an etching tank containing sodium hydroxide (caustic soda) and in some cases with an added inhibiting agent which prevents too great an attack on the surface of the aluminum. This etch normally produces a white matte color as a result of the diffused nature of the surface. The strength of the solution, temperature and the period of time during which the work is immersed all determine the relative qualities of the etched finish.

Bright Dip—Where a bright and specular finish is required and buffing is not convenient or economical, good results can be obtained with a chemical bright dip. This solution is normally composed of phosphoric and nitric acids, operated at approximately 200° to 220° F., contained in a special stainless steel tank, properly vented so as to protect the worker from the fumes. Bright dipping is certainly not recommended for casting alloys which contain any appreciable percentages of copper or silicon.

The above surface treatments can be used with wide variations and only the experienced finishing shop can acquaint you fully with the possibilities of each differ-

PARTIAL VIEW of polishing room, showing polisher satin-finishing door plate, buffing door framing, pans, small parts, etc.

ent type of finish.

Following the preliminary treatments, the work is handled with great care for the subsequent anodizing process.

Anodizing

Anodizing is creating in the surface of the aluminum a coating of aluminum oxide by a chemical electrical means or process, for both decorative and protective purposes. Anodizing is definitely recommended as a protective measure to prevent corrosion in the aluminum and to maintain the original desired finish.

During World War II the entire activity of the anodizing plants throughout the country was geared to Government specification work, and millions of Signal Corps, Naval and Aircraft parts and fittings were anodized to meet Government Specification AN-QQA-696a. This specification called for the anodized part to be placed in a Government approved salt spray box at an angle of 5° from the vertical and to resist corrosion attack for a period of 250 hours. This box was operated at 95° F. (±5°) with specified salt water concentration and fogging conditions.

There are several types of electrolytes for use in anodizing, among them are oxalic, chromic and sulphuric acids. It is with the latter, sulphuric acid, that we will concern ourselves, as this is the most generally accepted process and the one that lends itself best to decorative finishes.

Sulphuric acid anodizing is normally carried out in a lead lined tank using 15 to 25% sulphuric acid and operated at a temperature of 70° to 78° F. Higher temperatures are sometimes used for color work, but they provide a softer and more porous coating which absorbs dye better but does not have the abrasive resistance qualities. Anodizing tanks are normally cooled by refrigeration or else by cold water coils so that the temperature of the bath may be maintained within the prescribed limits. Direct current is usually used for anodizing and is provided by a motor generator set

PARTIAL VIEW of racking area—Multiple racks being used for pulls for sliding cabinet doors; larger racks for framing members; different racks for different parts.

FULL LOAD of structural extrusions on monorail being pulled from anodizing tanks 24 feet long by 6 feet deep.

Foreman inspects flood lighting fixtures. Window frames ready for etching.

Anodizing tank in foreground is 13 feet long by 7 feet deep by 5 feet wide.

Ten dyeing tanks may be seen in rear of the picture.

or a rectifier unit supplying 15 to 18 volts of direct current which in turn, will normally produce approximately 12½ amp. per sq. ft. of work in the bath.

It is recommended that a minimum of 30 min. of time in the anodizing tank be used which should produce an oxide coating of approximately .0003.5 to .0004 inch in thickness. This is satisfactory for interior use and some exterior applications where corrosion is not a real factor and when properly sealed will pass the standard Government specification for anodizing. However, work that is going to be exposed to corrosive elements should be anodized for a period of one hour to secure maximum corrosion resistance. A one hour anodizing will normally produce a coating of .0007 to .0008 inch thickness. Windows and other architectural parts should be further protected by one or two good coats of clear lacquer with a methacrylate base, particularly if they come in contact with water.

The use of a sulphuric acid electrolyte gives an oxide coating which has many desirable characteristics, such as light color, hardness, and resistance to corrosive influences, etc. The anodic coat on extrusions or bar stock usually measures between 7 and 8 on the Moh Crystal Hardness Scale wherein carbon is 1 and diamond is 10. From the operating standpoint, this electrolyte is economical, durable and operates at satisfactory voltages.

Clear Anodizing

Following the presurface treatment wherein the material is buffed, ground, satin finished, polished, sand blasted, or treated by some other means, the work is placed on racks preparatory for the anodizing tank.

All anodizing should be done on strong aluminum racks which have clamps, spring or other positive type of contact with the work. In this way, the work is held securely in place while the anodizing process occurs. It is interesting to note that anodizing differs from plating in that in plating the work and the plate metal easily pass electrical current and assist in creating an additional plate. It is simple to wire pieces for various types of plating or to plate them in a barrel, wherein the work is tumbled continuously for a specified period of time. In anodizing this cannot be done because the anodic coat develops a very high dialectric strength, and for this reason racks must be properly designed to carry the current adequately to all parts of the aluminum material being finished, and wherever there is a rack contact, there will be no anodizing because that is the point at which the current passes from the rack into the aluminum article. Following each anodizing cycle, the rack must be stripped of its oxide coating before being placed back in operation, otherwise it would be impossible for the current to be transmitted.

After the work has been racked, thoroughly degreased and cleaned, it is placed in the anodizing tanks and the current applied for the specified time to achieve the desired result. Following the anodizing, the work is rinsed, neutralized, and then placed in any one of three different types of seals depending on the character of the work being anodized and the specifications to which it must conform.

These seals are normally as follows:

Water—Operated at 208° to 212° F. with a minimum immersion time of 15 min. to 30 min. during which time the sealing process takes place. The pH of the seal solution must be properly maintained.

Nickel Acetate—Operated at 208° to 212° F. using one-half to one ounce of nickel acetate or aluminum acetate per gallon of water, with a minimum sealing time of 15 minutes to achieve the desired results.

Sodium Dichromate or Potassium Dichromate—Operated at 208° to 212° F. normally in a 5% solution of the above chemical with, of course, the concentration, time and temperature controlled as in the two other solutions.

Work that is to be chemically or electrically Bright Dipped is usually handled on racks after the prescribed pretreatment, and following the dipping process and subsequent acid rinses, is placed in the tank for the regular anodizing procedure.

Work that has been highly buffed is rarely if ever caustic etched, while some ground, satin, or polished finishes are given a slight caustic etch. Usually rolled sheets, extrusions and other forms are normally etched in a sodium hydroxide solution for a period of two to five minutes, depending on the character of the etch desired.

This is followed by rinses in running water, subsequent rinses in nitric acid or proprietory acid pickle, to remove the smut created by the etching, followed by a water rinse and then into the anodizing tank.

Appearance

In addition to the variety of pretreatments, the appearance of the oxide coating (which is relatively colorless) varies with the alloy used. During the anodic oxidation process, certain elements may be retained or occluded within the film and modify its appearance. Silicon, for example, present as an impurity in commercial aluminum, may show a brownish or gray tint. If present in large amounts as in certain casting alloys, the oxide will have a brown to black color. Different alloying metals cause different tints to the anodic film and occasionally streaks are created due to metallic constitutents present in the metal.

The purer the aluminum, the clearer the appearance of the film, and the better the alloying, casting, extruding, rolling or drawing at the mill, the better the finished product.

Simple Tests

Anodizing work that has not been properly **sealed** will fingerprint when handled and one of the easiest tests of the character of the seal is made by using ordinary ink from a ball point pen. Simply write on the work, and if you can readily remove all traces of ink by a simple washing operation, you can be sure that it is properly sealed.

Another test to determine whether a piece of work has been **anodized** is by using two dry cells in series with a bell and applying normal pressure with the open ends of the circuit to the piece of anodized aluminum; if the bell rings, you can be sure that the work has not been anodized properly.

Color Anodizing

When aluminum has gone through its preliminary treatments and anodizing cycle and is rinsed and neutralized after the anodizing bath, it can be colored with any one of a number of dyes or mineral pigments. It is definitely recommended that interior colors have a minimum of 30 to 50 minutes anodizing, depending upon the shade and color desired. Exterior color should always be anodized for at least one hour before any dyeing process takes place. In our particular plant, ten colors are available and they are housed in stainless steel tanks from 6 to 12 ft. long.

Mineral pigment color coatings are applied after anodizing for certain colors. This is usually done by first absorbing a suitable metal salt in the coating and then precipitating an insoluble metal pigment.

For dye colors we use imported Swiss dyes with a concentration of one-quarter ounce per gallon up to eight ounces per gallon for the various colors. They are normally operated at a temperature of 140 degrees with a controlled pH and with a period of dyeing time varying from one minute for certain colors for interior use up to thirty minutes for the exterior dyeing cycle.

Following the immersion of the work in the dye, it is rinsed at least three times to remove any excess dye particles before it is placed in the sealing tank. Sealing of dyed coats is normally done in a nickel acetate solution previously described for clear anodizing, while pigmented colors are sealed in boiling water for 10 to 15 minutes.

A variety of colors from the pigment coloring process is available, but the colors are not as brilliant nor as transparent as the dye colors and the range of colors is definitely limited. Usually the pigmented coatings require some after-finishing or cleaning to remove the surface film of loose pigment. Washing with a soft cloth and a mild abrasive cleaner with water or color buffing may be employed.

The practice of applying paints and lacquers of the same color as pigmented or dyed coatings finds favor in some applications where rough handling is encountered. Removal of the paint coating by abrasion which would ordinarily remove the metal base, is much less apparent when a color anodizing is used as a base. It is interesting to note that anodizing is the best possible means of providing maximum adherence of paint to the aluminum.

The capacity of the anodic coat to adsorb depends primarily on the pore space in the coating which is determined by the choice of the electrolyte, temperature of the bath, and the time of the coating. The con-

centration of the dye solution, its temperature, and time or immersion are also factors in determining the intensity of the color in the finished article. It is apparent therefore, that close control of anodic coating conditions as well as the dyeing operation is necessary if uniform dye coatings are to be produced.

Maintaining a uniform shade of color is very difficult and it is next to impossible when different alloys are being used. Extrusions, bar stock, sheets and rolled forms all have different characteristics when it comes to coloring and it is not to be assumed that a piece of 2024 aluminum sheeting can be dyed to match exactly the same color and shade of a 6063 extrusion. Grain structure also shows up very definitely and the purer the aluminum alloy is, the better chance we have for uniform and even color. Color work for decorative purposes is frequently color buffed, using a wax or similar compound to add luster to the color coat.

Color Fastness

Dye color coatings, like all other dyed materials, are susceptible to fading in sunlight. The resistance to fading varies widely, however, depending upon the particular dye selected, and the amount of dye stuff absorbed in the coating. In general, dye colored anodized coatings are satisfactory for interior service unless they are exposed to direct rays of the sun, as through a window. However, for prolonged exterior exposure in architectural applications, no definite definite guarantee of lifetime use before fading can be made. Tests made by leading aluminum companies and dye companies at their own plants, in Florida, Arizona, Basle, Switzerland and by means of the commercial Fad-o-meter, show that some colors have a relatively long resistance to fading by direct sunlight, although no company (to my knowledge) at the present time will guarantee their colors to remain the same for an indefinite period of time. When color is achieved by virtue of the alloying elements within the product itself, the colors are more fade resistant.

Designs in Color

Many unique interior applications can be created by the use of grained or designed metal, expanded aluminum and any number of architectural forms. Some beautiful designs are made by anodizing aluminum tread plate and then polishing the high marks with a 220 sanding wheel which removes the anodizing and leaves bright shining spots of aluminum readily apparent on the dyed background. Spots of color in an entrance, room or building add greatly to their appearance.

Chemical Treatment

Many aluminum products today disregard the advantages of anodizing and merely etch the material and paint over it. Aluminum notably is poor in

(See Page 33)

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(From Page 19)

thickness, rigid tray type assemblies. The facing is leather grain embossed aluminum bonded to resin impregnated kraft honeycomb cores. The aluminum extrusions are of the fluted design, factory etched and anodized for a satin finish. The extrusions are an integral part of the system and are used for all battens, framing members, enclosure strips, cover strips, corner posts, glazing angles, door frames, stops, bases, plinths, etc. Doors are of selected birch veneer and as gates come in several sizes.

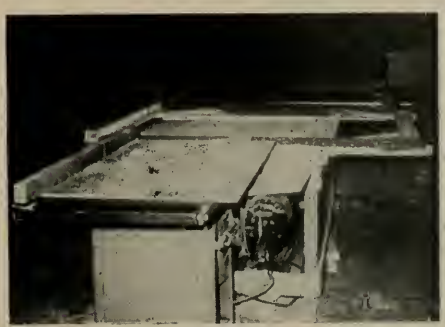

TABLE SAW for use on job in cutting panels and extrusions.

In this installation, ceiling high, cornice high, glazed railing and low railing partitions have been used to advantage. Six volt electrical wire for the lighting control system was installed in the door frames and corner posts. Base wiring for electrical equipment and telephones were run in the base dividers and through floor ducts. Wires in the partitions were easily installed. Relocation, too, can be done with minimum expense.

The harmony and efficiency desired have been achieved. The beige colors used harmonize with floor and ceiling tile. The lighting, as the photographs show, is excellently distributed. There is a quiet, workable feeling to the complete space. Possibly the nicest compliment on the complete job is that employees say they enjoy coming to work in this environment.

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WASHINGTON STATE CHAPTER

The Architectural Practice Committee has obtained more than 50 Seattle Building Department Rulings on the Zoning and Building Codes and the use of street property. The Committee also announced a series of seminars will be held during the new year on such subjects as Building and Zoning Codes, Estimating, Good and Bad Use of Building Materials, Specifications, and Supervision.

1956 BUILDING PRODUCTS LITERATURE COMPETITION

The 1956 Building Products Literature Competition, sponsored jointly by The American Institute of Architects and The Producers' Council, Inc. has been announced.

This competition provides another opportunity to illustrate to the producers of building products, through the nomination by A.I.A. Chapters of examples of product literature, the type of technical and descriptive literature considered most informative to the architect.

OREGON CHAPTER

James F. Bell, Executive Vice-president and Projects Engineer of the Portlnd Gas & Coke Company was the principal speaker at a recent meeting of the Chapter.

"Natural Gas Brings Community Progress" was the theme of the meeting, which was also addressed

Northern California Chapter:
Wayne Hertzka, President; Wm. Stephen Allen, Vice-President; Rex Whitaker Allen, Secretary; C. Morrison Stephens, Treasurer; and Directors: Wm. Corlett, Robert Kitchen and Bernard Sabaroff. Executive Secy., May B. Hipshman. Chapter Offices, 26 O'Farrell St., San Francisco.

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Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institute—Los Angeles:
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by C. W. Steele, Residential Sales Manager of the company who spoke on "It's a Natural for the Architect."

A colored movie "Westward Flow" was shown.

PASADENA CHAPTER

The January meeting, being the Annual Meeting, was held in the Town & Country Club, Altadena. Reports of various Chapter activities for the year were made and the annual report of President Henry C. Burge, emphasized how active the Chapter had been during the past year.

NORTHERN CALIFORNIA CHAPTER

"Architecture U.S.A.," subject of a film produced by the American Institute of Architects in Washington, D.C., has been acquired by the chapter and plans are being made for its extensive showing, according to Wayne S. Hertzka, president.

A preview of the film was staged at M. H. deYoung Memorial Museum on January 19th, with a large number of city and civic officials in attendance.

CALIFORNIA COUNCIL OF ARCHITECTS

Recent public statements by California Assemblyman Sam Geddes that excessive fees to architects are padding public school construction costs were challenged at a meeting of the Assembly Interim Sub-Committee on School Construction Costs in Oakland by Malcolm Reynolds, A.I.A., architect and former president of the East Bay Chapter and currently president of the California Council. John Lyon Reid, A.I.A., architect, also appeared before the legislative body.

Reynolds cited specific examples provided by architects throughout California that streamlining of procedures of state agencies would do much towards elimination of duplication and would do much to speed school construction and reduce hidden costs.

The hearing concluded a series of conferences on rising school costs, and reports are to be made at the 1957 California Legislative Session in an effort to clarify the present situation.

WOMEN'S ARCHITECTURAL LEAGUE OF LOS ANGELES

Mrs. Stewart S. Granger, long active in WAL activities, has been elected to serve as President of the Southern California Chapter, Women's Architectural League, for 1956.

SOUTHERN CALIFORNIA CHAPTER

George Bain Cummings of New York, President of The American Institute of Architects, was a speaker at the Annual January meeting held in the Ambassador Hotel ballroom. He discussed national architectural affairs.

Retiring president Wm. Glenn Balch reported briefly on the past year Chapter activities, and Paul Robinson Hunter was seated as president for the ensuing year.

Earl T. Heitschmidt, first vice-president of the A.I.A., was also in attendance.

WITH THE ENGINEERS

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Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Professor David M. Wilson, graduate of the University of Michigan and head of the Department of Civil Engineering at the University of Southern California, was the principal speaker at the January meeting held in the Rodger Young Auditorium, Los Angeles.

Prof. Wilson's subject was "Plastic Design in Structural Steel."

Installation of the new Officers and Directors elected to serve during 1956 included: William T. Wheeler, President; R. W. Binder, Vice-president; Albin W. Johnson, Secy-Treas.; and Directors Roy G. Johnston, David M. Wilson, Harold L. Manley and Cydnor M. Biddison.

Member Oliver Bowen has been invited by Don Carlos Mori, President of the University of Chile, in Santiago, to deliver a series of lectures at the University.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco Section

Professor Harmer T. Davis recently addressed members on the subject "Issues Involved in a National Highway Program," discussing engineering and financial aspects of the national system of interstate highways and the implication of possible policy changes which may take place.

Prof. Davis is a member of theACSE Task Committee on the National Highways Program, and as a Director of the Institute of Transportation and Traffic Engineering and Chairman of the Division of Civil Engineering of the University of California, gave some very interesting and informative remarks on the nation's highways.

CALIFORNIA CIVIL ENGINEER EXAMINATION RESULTS

Result of the California Civil Engineering registration examination given to a large number of applicants in June of 1955, have recently been announced by the State Board of Registration for Civil and Professional Engineers.

Out of the total of 879 persons taking the examination, only 241 passed or a percentage of only 27.5 were successful in obtaining sufficiently high grades to qualify for registration. Fourteen hundred and fifty took the Engineer-in-Training examination and 744 received a passing grade, a percentage of 51.3.

AMERICAN SOCIETY OF CIVIL ENGINEERS—Los Angeles Section

Samuel B. Morris, formerly General Manager and Chief Engineer, and now Consultant, Department of Water & Power for the City of Los Angeles, will be the principal speaker at the February 8th meeting in the Rodger Young Auditorium, Los Angeles.

Morris will speak on the subject "Atomic Energy and Power Production for Peaceful Uses."

Last April, Morris was appointed as the only West Coast member of a nine-man Civilian Advisory Panel on the Impact of the Peaceful Uses of Atomic Energy. He was also a member of the U.S. delegation to the International Conference on Peaceful Uses of Atomic Energy held at Geneva, Switzerland, last August.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

"California's Worst Flood Disaster" was the subject of a talk at the January meeting by Colonel William F. Cassidy, Division Engineer, South Pacific Division. Col. Cassidy related many interesting factors of the recent rains and floods of Northern California.

Announcement was made that the Annual Dinner Dance would be held on March 9, at the Presidio Officers Club, San Francisco.

BAY AREA ENGINEERS WEEK CHAIRMAN NAMED

Morrough P. O'Brien, Dean of Engineering at the University of California, has been named Chairman of the Bay Area Engineers' Week Committee in charge

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

Howard C. Wood, President (Berkeley); R. D. Dewell, Vice-President (San Francisco); Blair I. Burnson, Vice-President (Oakland); Robert M. Kennedy, Secretary (San Francisco); Bernard A. Vallerga, Treasurer (Alameda). Directors: J. E. Rinne, H. C. Wood, R. D. Dewell, B. I. Burnson, R. M. Kennedy, B. A. Vallerga. Daniel Shapiro, President, Jr. Forum. Office of Secy., 604 Mission St., San Francisco.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 548 S. Spring St., Los Angeles.

Structural Engineers Association
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

CDR. Paul E. Seufer, President; J. G. Wright, 1st Vice-President; COL. Wm. F. Cassidy, 2nd Vice-President; H. T. Anderson, Secretary; Thomas Hurley, Treasurer. Directors: COL. L. R. Ingram, LTCOL. C. S. Lindsey, E. H. Thouren, CDR. W. J. Valentine, P. Wm. Kohlhaas, BGEN. D. F. Johns, RADM. C. A. Trexel, COL. Paul D. Berrigan, and Larry L. Wise.

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of the 1956 observance of National Engineers' Week, February 19-25. Vice-chairman of the group is C. L. Phillips, American Institute of Electrical Engineers. Other officers appointed to the committee include K. E. Hallikainen, Instrument Society of America, secretary; and L. G. Thomas, California Society of Professional Engineers, treasurer.

The Bay Area Engineers' Week Committee represents a total of eighteen national engineering societies.

Engineers' Week, held during the week of Washington's birthday in honor of the engineering achievements of the nation's first president, is also designed to pay tribute to the accomplishments of modern engineering in the United States and to emphasize the opportunities available to the youth of America in engineering.

ALFRED S. NIBECKER, Jr., GIVEN HONORARY ENGINEER MEMBERSHIP

Alfred S. Nibecker, Jr., recently retired Architect and Business Manager for the Los Angeles City Board of Education, was awarded an Honorary Membership in the Structural Engineers Association of Southern California at a recent meeting.

It is the highest award of the engineering association. Presentation was made by past-president Harold King.

Nibecker began private practice in Los Angeles, with Mayberry & Parker, in the early '20's, and has served as Los Angeles Architect since 1926. He is a Fellow of the A.I.A.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"New Grading Rules In The Douglas Fir Region," was the subject of a talk at the January meeting by T. K. May, Director of Technical Service, West Coast Lumbermen's Association, and Frank B. Benzon, president and general manager of Timber Structures, Inc., and president of the American Institute of Timber Construction.

May discussed the new Standard Grading and Dressing Rules which describes grades, grade names, and working stresses, and some stress-grades which have been added, while Benzon discussed the effect of the new Grading Rules on Structural Timber Design.

T. E. Newman, C. R. Graff, E. R. Smedes, O. E. Merwin and Parker Robinson have been added to the Engineers Week Committee.

New Member—Yvonne Selde, Civil Engineer.

IMPORTANT NOTICE!

As of December 1, the new

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Edited by Robert W. Harrington, **Clay Brick and Tile Association,** 55 New Montgomery Street

WALTER L. DICKEY
Structural Engineer

"A STRUCTURAL ENGINEER LOOKS AT REINFORCED BRICK MASONRY"

The first Producers' Council Meeting in 1956 was held on January 16 at the Sheraton-Palace Hotel, San Francisco, with the program presented by the Clay Brick and Tile Association. The speaker was Mr. Walter L. Dickey, structural engineer, Bechtel Corporation and president Structural Engineers Association of Northern California. Mr. Dickey's subject was "A Structural Engineer Looks At Reinforced Brick Masonry." He reviewed and discussed the important features of this type of construction such as, what is it? how is it done? how to achieve earthquake resistant brick construction plus client satisfaction.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

ASSOCIATED GENERAL CONTRACTORS BUILD

Carl H. Wittenberg, president of the Southern California Chapter of Associated General Contractors has announced plans for construction of a $100,000 building on the northwest corner of Beverly Blvd. and Coronado to house offices of the Chapter.

Charles O. Matcham, A.I.A., architect has been selected to design the building.

ARCHITECT SELECTED

Architect Peter Kump has been commissioned by the Las Lomitas Elementary School District, Menlo Park, San Mateo county, to draft plans and specifications for construction of a new Elementary school near Menlo Park.

ARCHITECTS COMPETITION

A number of America's outstanding architects have been invited into a restricted competition by the U.S. State Department to select the designer for the new United States Embassy to be constructed in London, England.

Among those invited to participate in the project were William Wurster, Dean of the School of Architecture, University of California, and Ernest J. Kump, Architect of San Francisco.

NATIONAL MEETING, AMERICAN SOCIETY CIVIL ENGINEERS

The national winter convention of the American Society of Civil Engineers will be held in Dallas, Texas, February 13-17, with more than 1,400 expected to attend, according to I. W. Santry, Jr., Associate Professor of Civil Engineering at Southern Methodist University, and General Chairman of the Convention.

Some 80 technical papers will be presented.

CARSON CITY HIGH SCHOOL

Architects Vhay & Grown of Reno, Nevada, are completing drawings for construction of a new 15-classroom Carson City high school building.

The new structure will be of reinforced concrete construction with some glass block, wood roofing, and some structural steel. In addition to classrooms, it will include a gymnasium, multi-purpose room, kitchen, toilet rooms, and administration facilities.

TRADE UNION TO BUILD NEW HALL

Architect Hugh Gibbs of Long Beach is completing plans and specifications for construction of a masonry union hall to be built in Los Angeles for the International Association of Frost Insulators and Asbestos Workers, Local No. 5.

The new building will contain 4,000 sq. ft. of area and will include a composition roof, concrete and asphalt tile floors, forced air heating, steel projecting sash, interior plaster and toilet facilities.

CALIFORNIANS NAMED TO BRAB ADVISORY COMMITTEE

Reuben W. Binder, Los Angeles, Chief Engineer, Fabricated Steel Construction, Bethlehem Pacific Coast Steel Corp., and P. C. Combs, President, Arch Rib Truss Company of Los Angeles, have been appointed by the Building Research Advisory Board to serve as members of an Advisory Committee to conduct a study of the "Anchorage of Exterior Frame Walls to Various Types of Foundations."

The study is one of several being conducted by BRAB for the Federal Housing Administration under a contract between FHA and the National Academy of Sciences. The Advisory Committee's work is expected to be completed about mid-February and is under the general chairmanship of Prof. Albert G. H. Dietz, Department of Civil and Sanitary Engineering, Massachusetts Institute of Technology.

DON LYON GETS PROMOTION

Don W. Lyon has been named general sales manager of the Textile Division of the L.O.F. Glass Fibers Company, according to a recent announcement by J. M. Johns, vice president and director of sales. He succeeds C. F. Hegg, recently named head of a new automotive sales division.

Lyon will supervise sales of the company's textile yarns and roving to weavers and to the electrical, plastic and allied industries, and will remain in Toledo, Ohio, where he has been serving the company since leaving San Francisco.

SCHOOL BONDS APPROVED

Voters of the Winters Elementary School District, Yolo County, recently approved issuance and sale of school bonds for the purpose of building a new elementary school in Winters.

The new facilities will include 8 classrooms, toilet rooms, administration room, and general purpose rooms.

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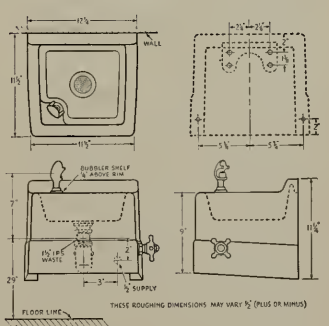

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PERSONALITIES

ALBERT C. MARTIN, Jr.
Architect, A.I.A.

Los Angeles, California

"Al" Martin has a traditional background steeped in architecture. A graduate of the University of Southern California, and post-graduate at California Institute of Technology, he is a member of the firm of Albert C. Martin and Associates, and associated with him as principals are his father, Albert C. Martin, Sr., and J. Edward Martin, Civil Engineer. Offices of the firm are located at 333 South Beaudry Avenue, Los Angeles.

ALBERT C. MARTIN, Jr.
Architect, AIA

Some of the outstanding work in which "Al" and his firm have played an important part are: Lakewood Shopping Center (one of the nation's largest); innumerable buildings which won awards from Southern California's Chapter AIA; a 3-level parking structure for the May Co.; an office building for Consolidated Western Steel Co.; office and show room for Kohler of Kohler; office and warehouse for S. C. Johnson & Son. The firm is now engaged in the planning of a huge May Co. Shopping Center in West Covina.

Martin's hobbies consist of sailing, in which particular field he has won a high point trophy from the Cabrillo Beach Yacht Club in 1955. He is past president Southern California Chapter AIA; past president California Council of Architects; member Board of Directors, Los Angeles Orthopedic Hospital, Chairman Expenditures Committee, Los Angeles Welfare Planning Council; member Board of Directors, Los Angeles Chamber of Commerce; and member Los Angeles Beautiful Committee. Married and the father of three boys and two girls.

KRAFTILE ANNOUNCES WINNERS IN ANNUAL PATIO CONTEST

Entries in Kraftile Company's First Annual Patio Contest have been judged and the winners selected, according to C. W. Kraft, president of the firm whose general offices and manufacturing plant is located at Niles, California.

Chester P. Winston, of Oakdale was first prize winner in the over 150 square feet classification and N. F. Kubicek, 5701 Harbord Drive, Oakland, won the first award in the up to 150 square feet classification. In addition to the $75.00 denomination Savings Bonds, which were first prizes in each classification, first prize winers each received an amount of Kraftile patio tile equal to the amount used in their prize-winning patios up to 1000 square feet. Mr. Winston received 1000 square feet of patio tile and Mr. Kubicek received 130 square feet. Dealers who originally sold the tile to the prize winners also received equivalent amounts of tile.

Judges who selected the prize winning entries included: Professor H. L. Vaughn, Chairman, Department of Landscape Architecture, University of California, Berkeley, Calyifornia; Robert M. Babcock, President, California Association of Landscape Architects, Oakland, California; and Robert W. Harrington, Manager, Clay Brick and Tile Association, San Francisco, California.

Although rules of the contest permitted entry of patios no mater how built, most entries were from do-it-yourself hobbyists.

"The interest shown in this, our first contest, was

(See Page 34)

PHOTO CREDITS: Reynolds Metal Company, cover, pages 13, 14, 15, 16, 17, 18, 19 and 25; Gordon Sommers, page 8; Clay Brick & Tile Association, page 30; Curtis Studios, page 32; Torgensen Studio, page 22; Arcadia Metal Products, pages 10, 11 and 12; Ernest Braun, page 10 (top); Dale Healy, pages 11 and 12 (bottom).

ALUMINUM FINISHING

(From Page 25)

paint adhesion qualities and it is difficult for any type of paint or lacquer to permanently stick on the aluminum without some sort of surface treatment other than just plain etching. When anodizing is not practical for cost reasons, a paint base can be created by means of a chemical immersion which creates a thin oxide coating on the surface of the aluminum. This acts as an excellent corrosion resistance medium and as a paint base, and if anodizing cannot be secured, certainly a chemical base should be created before the material is painted.

Aluminum Coated Steel

A new field of coating steel with aluminum is rapidly coming to the front. One company in the central part of the United States is now continuously coating steel wire with aluminum. This wire is normally used in the center of ASCR cable where previously they had only been able to have galvanized wire with the aluminum strands on the outside. As soon as moisture came in contact with the aluminum and zinc coating, an electrolytic reaction was created and the steel wire rusted through..

Mollerizing is a patented Swedish process wherein steel is coated with aluminum by means of a hot dip process. Our plant is now in operation and we hope that within the near future, we will be able to offer aluminum coated steel bolts and nuts for use with aluminum awnings, skylights and other building products. Mollerized steel provides the strength of steel with the corrosion resistance and adaptability of aluminum. Tests made on Mollerized steel have shown that it will even increase the life of stainless steel in such applications as baffle plates in Scotch Marine boilers. It is an ideal coating for pipe, platforms and other materials used in the petroleum industry and has special value in marine applications, food handling equipment, meat hooks, rails and other uses. Wherever protection against corrosion is required at high temperatures, Mollerized steel offers the answer, because at temperaturs in excess of 1200° F. the aluminum fuses further into the steel to form a thicker coating of ferrous aluminum alloy and the balance of the aluminum fuses into an aluminum oxide on the surface of the material to prevent corrosion. This subject will be covered by a paper appearing in later editions.

Conclusion

In the foregoing article we have made no specific statements as to length of tanks, methods and amounts of ventilation required, types of material, kinds of machines, etc., leaving that up to the finishing specialist to properly choose the equipment that will best satisfy his needs. We can only call attention to the fact that proper temperature control, pH determinations, solution analysis, good general housekeeping, and a wide variety of successful experiences assist in providing the proper finish for the completed article.

We can see the variety of finishes for aluminum in scores of applications and we can be sure that when we run a kerchief on a piece of bright aluminum and the kerchief turns black, that it isn't anodized; or when we see corrosion appearing on aluminum articles due to the sea air we know that they have been improperly protected or not protected at all. Aluminum is one of the finest metals known today and we believe it certainly is worthy of the proper finishing to make it both useful and decorative for years to come.

ALUMINUM FOIL COVER

(From Page 6)

als Company offices building at 3201 Third street, San Francisco, are shown on the cover of this issue.

Although aluminum foil does not have a color of its own, it reflects all other colors, showing them in changing and unusual patterns, and it also lends itself perfectly to the use of companionable colored inks such as the blue used on this cover.

Although a comparative newcomer in publications use, aluminum foil has made tremendous strides in the past year and will surely become more generally used in the future.

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KRAFTILE PATIOS

(From Page 32)

such that we plan to repeat it next year," Mr. Kraft said. "The judges were unanimous in their praise of the beauty and originality of the many entries and found it very difficult to select between first, second and third prize winners.

"We believe next year's contest, which will be announced early in the year, will generate an even greater amount of interest. Currently, it is our feeling that rules should be the same as this year's, i.e., there is no stipulation as to when the patio entered in the contest was built and it may have been built by a contractor or by the owner himself. The only requirement is that Kraftile patio tile was used in the patio.

"All the entrant has to do is to send in a picture of his patio, along with square footage. This latter is required because we believe it is much fairer for entrants to compete in classifications wherein all entries are more or less the same size," Kraft concluded.

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PAUL A. ELSNER ELECTED PRESIDENT CENTRAL CHAPTER GEN. CONTRACTORS

Paul A. Elsner, General Manager of Swinerton & Walberg Company, General Contractors, San Francisco, was recently elected president of the Central California Chapter of The Associated General Contractors for 1956.

PAUL A. ELSNER
President

Elsner's firm is internationally recognized in the construction industry. Established in 1888, they specialize in every known type of construction projects in the western Hemisphere including Hawaii, Central and South America and the U.S.

Elsner is a graduate Civil Engineer of the University of Missouri, and is a Registered Civil Engineer in that State. He is a member of the Board of Directors AGC-CCC, and was elected Chapter vice president in 1955. Elsner has served as a member of the Structural Engineers Conference and Entertainment Committee, being Chairman of the latter during 1955. He is also an active member in the Producers Council, Northern California.

Elsner resides in Atherton, California, with his wife and two children.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

MODERN BUILDING ENCYCLOPEDIA. Technical Editor, N. W. Kay. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $15.00.

An authoritative reference to all aspects of the building and allied trades contains 768 pages and over 800 specially prepared drawings. More than thirty expert writers, all specialists with considerable practical experience, and many with wide experience as lecturers and instructors, have contributed to this entirely new and comprehensive reference work, which has been carefully planned to meet a long-felt need within the building industry and its various allied trades.

Designed to cover the requirements of the contractor, the craftsman, the student and apprentice this single volume contains nearly 4000 A-Z entries and forms a complete and fully up-to-the-minute guide to all terms used in the theory and practice of present-day building techniques.

Content is divided into 29 major subjects of construction. A valuable addition to any construction industry reference library.

CONSTRUCTIONAL STEELWORK. By Oscar Faber, Consulting Engineer. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $7.00.

A very clear and thorough explanation is here given of the principles underlying the design and construction of steel frame buildings and other examples of steel structures.

The reader is led step-by-step from the elementary beginning to more complex aspects, such as the design of frames with end restraint and monolithic welded frames, for which the reduced bending moments in the beams and the additional moments in the columns are calculated. The use of higher mathematics has been purposely avoided.

Text is well illustrated by specially prepared drawings, supplemented by numerous tables. Book is intended to serve the practicing engineer and architect as well as steel draughtsmen, and students of architecture and structural engineering.

DO IT YOURSELF—Materials Guide. By Gifford B. Hicks. Popular Mechanics Company, 200 E. Ontario St., Chicago 11, Ill. Price $3.50.

This interesting book, written by an associate editor of Popular Mechanics Magazine, is of value to the trained craftsman as well as the Do-It-Yourself novice.

Realizing the need for a good, informative book on construction materials, the publication can be used as a reference guide to all the major and most minor building materials. It discusses the relative value of one product as against another for specific uses, and covers a number of varied topics such as roofing, plumbing, hardware and fasteners, and lumber types and grades.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Two wheel and platform trucks. New 2-color, 12-page catalog illustrates 49 different models of two wheel platform trucks, 12 types of dollies and 15 styles of casters; photos and complete specifications on each item provide concise product data. Free copy, write DEPT-A&E, Nutting Truck & Caster Co., Faribault, Minn.

Bronze Valves. New 3-color catalog covers complete line of Bronze Valves; lists more than 250 different sizes and styles of Low Pressure, Pressure Rated, and Flared Tube Valves, including a new line of Solder and Threaded End Swing Check Valves; gives complete information on weights, dimensions, and shipping quantities. Free copy available, write DEPT-A&E, Northern Indiana Brass Company, Elkhart, Indiana.

Transite Sewer Pipe with Ring-Tite Coupling. New 8-page booklet illustrates and explains economies which asbestos-cement pipe can effect in design, installation, operation and maintenance of a sewer system; shows how Ring-Tite couplings make tight joints more quickly; covers related items

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such as fittings ,and concludes with table of sizes, weights and crushing strengths. Free copy, write DEPT·A&E, Johns-Manville, 22 E. 40th St., New York 16, N.Y.

Metal Partitions. A helpful guide for color planning is featured in the 1956 Mills Metal Compartment Catalog (AIA File 35-H-6) covering toilet compartments, shower and dressing rooms, shower units and hospital cubicles; complete information on design and construction features, specifications, detailed drawings of typical layouts; standard hardware and fittings also illustrated. For free copy write DEPT·A&E, The Mills Company, 967 Wayside Road, Cleveland 10, Ohio.

Guideposts to Wood Markets. A new booklet giving complete and exact engineering knowledge of sawn and laminated timbers that could bring new economies in wood construction —by use of ultrasonics in stress grading structural timbers. Use of sound waves to "X-ray" timbers and boards would provide accurate diagnosis of the products throughout, enabling their full working strength to be used, thus smaller timbers could be used in many instances where larger ones are presently required. Free copy available, write DEPT·A&E, Timber Engineering Co., 1319 18th St., N.W., Washington 6, D.C.

One-Stop Service Center. New brochure describes newest "one stop service center" for school supplies in Northern California; valuable data for churches, schools, industry and organizations seeking used, surplus and new merchandise meeting rigid specifications. For free copy write DEPT·A&E, School Equipment Co., 1818 Market St., San Francisco 2, Calif.

Furred Metal Lath Ceilings. Title of the latest Technical Bulletin now available from the Metal Lath Manufacturers Association; one of a series of explanatory bulletins developed by the Association and known as TB-16, embraces a description, specifications and details relating to furred ceilings under steel, concrete and wood joists; various tables, illustrations and diagrams present the subject in a most comprehensive manner. Free copy, write DEPT·A&E, Metal Lath Mfrs. Assn., 636 Engineers Bldg., Cleveland 14, Ohio.

Metal raceways. New catalog (A.I.A. File No. 31-C-62) gives complete data on metal raceways; standard sized sections for housing electric wires and cables; hinged lid feature of the duct permits access to wires and cables at all points throughout system to tapping, splicing, or other changes without disturbing existing work: systems approved for installation of feeders, branch circuits, control and signal wiring, extension of armored cables, flexible metal and rigid conduits, electrical metallic tubing, and surface metal raceways. Free copy, write DEPT·A&E, National Electric Products Corp., Pittsburgh 22, Pa.

Solenoid pilots. New bulletin describes several types of solenoid pilot for use with regulating valves; gives reasons for economies in on-off control, describes applications, and gives type of pilot, material of construction, maximum pressure and maximum temperature for two and three way pilots in steam, air, gas and liquid service; schematic diagrams of typical applications are also offered. Free copy, write DEPT·A&E, Spence Engineering Co., Inc., Walden, New York.

Liquid integral compound. New descriptive folder gives information on Perma-Pruf, an economical concrete and mortar auxiliary for waterproofing, hardening, quick-setting, dust-proofing and intensifying all Portland cement mixtures; includes table of time of set, and compression test results. Free copy, write DEPT·A&E, Concor Chemical Co., Hoboken, New Jersey.

How to paint your wood home. Answers to the questions (A.I.A. File No. 25C1) that a home owner asks when buying paint; comprehensive but easy to understand roundup of authentic information on paints, painting and exterior home maintenance prepared by technical groups in the lumber and paint industries; illustrated, and covers subjects such as "how often to paint; how to estimate amount of paint needed; how to prepare exterior wood surfaces for painting; how to prevent blistering, peeling and other troubles; types, moisture control and maintenance. Small charge for copy, write DEPT·A&E, National Lumber Mfrs. Assn., 1319 18th St., N.W., Washington 6, D.C.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb	5.05
Asphalt roofing, 15-lbs	2.70
Asphalt roofing, 30-lbs	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl	3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 per bbl. f.o.b. warehouse or $5.40 delivered.	
Cash discount on L.C.L.	2%
Trinity White, Medusa White, Calaveras White	1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Besalt
4x8x16-inches, each	$ .20	$ .21
6x8x16-inches, each	.24	.26
8x8x16-inches, each	.28	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.64

Aggregates—Haydite or Besalite

¾-inch to ¾-inch, per cu. yd.	$7.75
⅜-inch to ¼-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—

$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	¾x2¼	½x2	¾x2	Ax2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390.00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00
Floor Layer Wage $2.83 per hr.	

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
⅜ in. Obscure Glass	.63 per □ ft.
¼ in. Heat Absorbing Obscure	.54 per □ ft.
⅜ in. Heat Absorbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
⅜ in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
⅜ in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.80

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less then 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O..P. or D.F., per M. f.b.m. $100.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 95.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	225.00
"D" and better—all	225.00
Rwd. Rustic—"A" grade, medium dry—8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resewn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gel.)		Wholesale Raw	Boiled
Light iron drums	per gel.	$2.28	$2.34
5-gallon cans	per gel.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gel.)		Pure Gum Spirits
Light iron drums	per gel.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litherge—Dry Red Lead Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless,
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, whan out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.
¼-in. Rd. (Less then 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less then 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less then 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less then 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less then 1 ton) 7.15
1 in. & up (Less then 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ¾" ..... $ .18 - $ .35 sq. yd.
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x8½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00

Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plent

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quelity required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE, CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(21

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(19)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.75				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.765	N2.765	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.74 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%v	1%P; 4%v	1%P; 4%v	1%P	1%P	1%P; 4%v	1%P	1%P; 4%v	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	1½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w 1¼%PROM				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

ELEMENTARY SCHOOL, Fairmede, San Pablo, Contra Costa County. San Pablo Elementary School District, San Pablo, owner. New frame and stucco building to provide facilities for 9 classrooms, administration offices, 2 kindergartens, 2 play courts, and toilet rooms—$304,100. ARCHITECT: Schmidts & Hardman & Wong, Berkeley. GENERAL CONTRACTOR: Pacific Coast Builders, San Francisco.

HEALTH BLDG., Salinas, Monterey County. County of Monterey, Salinas, owner. One-story frame and stucco construction — $15,150. ARCHITECT: Jerome Kasavan, Salinas. GENERAL CONTRACTOR: Richard McBride, Salinas.

CHURCH, La Habra, Orange County. St. Stephens Episcopal Church, La Habra, owner. Frame and stucco construction of central church and social hall; composition shingle roofing, bolted wood beams, concrete slab, asphalt tile, forced air heating, steel and wood sliding sash, folding doors, kitchen area, toilet rooms, asphaltic paving. ARCHITECT: Culver Heaton, Pasadena. GENERAL CONTRACTOR: F. C. Littleworth, La Habra.

OFFICE REMODEL, San Francisco. Morris Plan Co., San Francisco, owner. Remodel present building at 715 Market Street, and add a new mezzanine floor; structural steel and reinforced concrete construction — $254,000. ARCHITECT: Hurt, Trudell & Berger, San Francisco. GENERAL CONTRACTOR: Dinwiddie Const. Co., San Francisco.

SCHOOL ADMINISTRATION BLDG., Santa Clara. Santa Clara Union High School District, Santa Clara, owner. One-story frame and stucco construction—$104,500. ARCHITECT: L. F. Richards, Santa Clara. GENERAL CONTRACTOR: Ben Sweigle, San Jose.

FIREMEN'S TRAINING FACILITY, Alhambra, Los Angeles County. Alhambra City Commission, Alhambra, owner. Four-floor firemen's training facility, 60 x 20 ft. in area at base with tower 16 x 20 ft.; masonry, wood frame, siding and stucco exterior, wood stairways, composition roofing, fire alarms, assembly room, office, toilet rooms — $29,427. ARCHITECT: Scott Quintin, Alhambra. GENERAL CONTRACTOR: Mayfair Constn. Co., Los Angeles.

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CHURCH & PARISH HALL, Vacaville, Solano County. Roman Catholic Archbishop of San Francisco, owner. Frame and some concrete block construction of a Church and temporary Parish Hall for St. Mary's Parish; laminated arches, 600 seating capacity — $193,813. ARCHITECT: John G. Minton, San Francisco. GENERAL CONTRACTOR: Ralph Larsen & Son, San Francisco.

JUVENILE HALL, Fresno. County of Fresno, owner. One-story concrete construction; facilities include dormitory of 55 beds, offices, kitchen, visiting rooms, recreation area — $437,809. ARCHITECT: Robert W. Stevens, Fresno. GENERAL CONTRACTOR: Harris Const. Co., Fresno.

SISTERS RESIDENCE, Pasadena, Los Angeles County. Roman Catholic Archbishop of Los Angeles, owner. Two-story frame and stucco residence at St. Phillips Parish; shingle tile roofing, cement, hardwood and linoleum floors, ceramic tile work, metal sash, heating and ventilating, electrical, masonry, sheet metal, insulation, exterior plaster; 6350 sq. ft. floor area — $88,200. ARCHITECT: George Adams, Los Angeles. GENERAL CONTRACTOR: Alex Sutherland, Monrovia.

DRUG STORE, Fresno. Nubuo Range, Fresno, owner. One-story concrete block and frame drug store building, 30 x 50 ft. —$13,377. ARCHITECT: Allen Y. Lew, Fresno. GENERAL CONTRACTOR: Dick Huston, Fresno.

BANK BLDG., San Leandro, Alameda County. Bank of America, San Francisco, owner. One-story, with mezzanine, reinforced concrete and wood roof, 37 x 64 ft. area—$168,370. ARCHITECT: Continental Service, San Francisco. GENERAL CONTRACTOR: Vance M. Brown & Son, Palo Alto.

FAIR GROUNDS, Riverside. Board of Supervisors, Riverside, owner. New steel frame Junior Exhibit Building, containing 23,400 sq. ft. of floor space, addition to existing building; and construction concrete block dressing room building at the Riverside County Fair Grounds—$160,000. ARCHITECT: Hermon O. Ruhnau, Riverside. GENERAL CONTRACTOR: Kretz & Wilson, Indio.

CHURCH, Oakland, Alameda County. Park Boulevard Presbyterian Church, Oakland, owner. Two-story reinforced concrete and reinforced brick, frame and stucco; laminated wood arches, enameled porcelain spire — $185,000. ARCHITECT: Robert B. Liles and Paul Tipton, San Francisco. GENERAL CONTRACTOR, N. H. Sjoberg & Son, Oakland.

PENNEY STORE, Merced. J. C. Penney Company, San Francisco, owner. One-story, with basement, masonry and frame construction, concrete slab floors, asphalt tile floors, acoustical tile ceilings, air conditioning, automatic sprinkler system in the basement, aluminum awnings; 100 x 140 ft. of area— $264,999. ARCHITECT: H. C. Light, Los Angeles. GENERAL CONTRACTOR: Contract Engineers, Los Angeles.

ARMY RESERVE TRAINING CENTER, Sacramento Signal Depot, Sacramento County. Two-story reinforced concrete building, utilities, paving roads and walks — $191,104. GENERAL CONTRACTOR: Affiliated Engineers & Contractors, Sacramento.

ELEMENTARY SCHOOL ADDITION, James Madison, Madera. Madera Elementary School District, Madera, owner. Frame and stucco construction, to provide additional facilities for 4-classrooms, and toilet rooms—$63,550. ARCHITECT: Charles James, Madera. GENERAL CONTRACTOR: R. G. Fisher, Fresno.

GIRLS EXERCISE ROOM, High School, Hanford, Kings county. Hanford Union High School District, Hanford, owner. Frame and stucco construction, 90x70 ft. of area — $35,325. ARCHITECT: Horn & Mortland, Fresno. GENERAL CONTRACTOR: R. G. Fisher Company, Fresno.

STORAGE & SERVICE, Herlong, Lassen County. Corps of Engineers, Sacramento, owner. Two new buildings at the Sierra Ordnance Depot; steel frame, corrugated and asbestos siding, asbestos roofing, reinforced concrete block masonry; change house, approximately 2,600 sq. ft. floor area, concrete slab roof, concrete pads, railroad facilities, utilities, pump station, 60,000 gallon water tank, water well, roads, fencing, waste disposal—$633,044. ENGINEER: U.S. Engineers. GENERAL CONTRACTOR: McDonald Bros., Los Angeles.

NEW ELEMENTARY SCHOOL, Pinedale, Fresno County. Pinedale Elementary School District, owner — $132,900. ARCHITECT: Swartz & Hyberg, Fresno. GENERAL CONTRACTOR: Long & Needham, Fresno.

CHURCH ANNEX, Chico, Butte county. Bidwell Memorial Presbyterian Church, Chico, owner. Frame and brick veneer construction, facilities for classrooms, offices and toilet rooms—$63,300. ARCHITECT: Lawrence G. Thomson, Chico. GENERAL CONTRACTOR: Fred J. Chapek & Associates, Sacramento.

LIBRARY, West Los Angeles, Los Angeles county. Board of Library Commissioners, Los Angeles, owner. New Public Library building to be constructed in West Los Angeles on Santa Monica Blvd. —$100,550. ARCHITECTS: Allison & Rible, Los Angeles. GENERAL CONTRACTOR: Parr Construction Company, Culver City.

NEW ELEMENTARY SCHOOL, Pinedale, Fresno county. Pinedale Elementary School District, Pinedale, owner. Complete new Elementary School building and all facilities—$132,900. ARCHITECT: Swartz & Hyberg, Fresno. GENERAL CONTRACTOR: Long & Needham, Fresno.

ASSEMBLY HALL & OFFICE, Huntington Park, Los Angeles county. Inter-

national Brotherhood of Operative Potters, Huntington Park, owner. 2-Story reinforced brick construction: composition roof, wood trusses, steel sash, concrete slab and asphalt tile floor with carpeting in office rooms, air conditioning, kitchen, garbage disposal, metal stove hood, toilet rooms; 31 x 62 ft. of area—$51,000. ARCHITECT: Kurt Meyer-Randon, Glendale. GENERAL CONTRACTOR: Nelson Bros., Glendale.

BOOKKEEPING MACHINE BLDG., San Jose, Santa Clara County. Bank of America, San Francisco, owner. One-story, reinforced concrete building, air conditioning, facilities for electronic bookkeeping machine operation—$185,000. ARCHITECT: Continental Service Corp., San Francisco. GENERAL CONTRACTOR: Johnson & Mape Const. Co., Menlo Park.

PROFESSIONAL BLDG., Carson City, Nevada. Owner c/o architect. Three-story, reinforced lift slab concrete construction, elevator, hot water heating, chilled water cooling; 29 x 80 ft. area—$160,000. ARCHITECT: Dale Smith, Reno, Nevada. GENERAL CONTRACTOR: Macomber-Brunzell Const. Co., Reno, Nevada.

OFFICE BLDG., Red Bluff, Tehama County. Tehama County Title Company, Red Bluff, owner. One-story, reinforced concrete, concrete block curtain walls, concrete floors; 3,000 sq. ft. floor area—$42,817. ARCHITECT: Albert W. Kahl, San Mateo. GENERAL CONTRACTOR: Rudolph Rapp Co., Red Bluff.

TELEPHONE EXCHANGE, Yreka, Siskiyou County. Pacific Telephone & Telegraph Co., San Francisco, owner. One-story reinforced concrete construction; 83 x 80 ft. floor area. ARCHITECT: Harry A. Thomsen, Jr., San Francisco. GENERAL CONTRACTOR: H. Barnhart, Medford, Oregon.

DEPARTMENT STORE REMODEL, Emporium, San Francisco. Remodel interior of present building, addition of new passenger and freight elevators — $500,000. ARCHITECT: Welton Becket & Associates, San Francisco. GENERAL CONTRACTOR: Dinwiddie Const. Co., San Francisco.

HOSPITAL, Queen Valley Hospital, Napa. Sisters of St. Joseph, Napa, owner. Three-story, with basement, reinforced concrete construction; aluminum sash, 2 passenger elevators and 1 freight elevator; 55,000 sq. ft. floor area; complete facilities for 90 beds—$1,100,000. ARCHITECT: Gene Verge & Associates, Los Angeles. GENERAL CONTRACTOR: Barrett Const. Co., San Francisco.

TESTING LABORATORY, North Hollywood, Los Angeles County. Bendix Aviation Corp., North Hollywood, owner. One-story concrete block testing laboratory, built-up composition roofing, steel deck, steel purlins and tapered steel beams, steel sash, concrete slab floor, air conditioning, plumbing, electrical work; 50 x 120 ft. area. ARCHITECT: Raymond D. Conwell & Associates, Los Angeles. GENERAL CONTRACTOR: Myers Bros., Los Angeles.

GARAGE, San Francisco. Standard Oil Company, San Francisco, owner. Two-story and two basement levels, reinforced concrete construction; 130 x 140 ft. of area—$600,000. ARCHITECT: Anshen & Allen, San Francisco. GENERAL CONTRACTOR: John T. Gould. San Francisco.

ELEMENTARY SCHOOL, Shasta Meadows, Enterprise, Shasta County. Enterprise Elementary School District, Enterprise, owner. Frame and stucco construction; facilities for 6 classrooms, multi-purpose room, kitchen, toilet rooms—$182,870. ARCHITECT: J. Clarence Felciano, Santa Rosa. GENERAL CONTRACTOR: Robert S. Bryant, Redding.

BRANCH LIBRARY, Santa Monica, Los Angeles County. City of Santa Monica, owner. Fairview Heights Branch public library building, rock roof, concrete slab and asphalt tile floors, acoustical treatment, plumbing, electrical, plate glass, forced air heating, asphaltic paving; 5000 sq. ft. of floor area—$69,848. ARCHITECT: Welton J. Fulton, Santa Monica. GENERAL CONTRACTOR: Melke Const., Van Nuys.

JR. COLLEGE, Reedley, Fresno County. Reedley Joint Union High School District, Reedley, owner. Project comprises classroom building, field house, music and arts building, student center, library building and administration facilities — $815,350. ARCHITECT: Benjamin Lippold, Fresno. GENERAL CONTRACTOR: Ellberg & Conklin, Kingsburg.

SANITARIUM, West Los Angeles. Wander & Kates, West Los Angeles, owner. Frame and stucco and rock veneer construction; rock roof, concrete slab, asphalt tile and terrazzo floors, steel sash, plaster walls and ceilings, forced air heating, plumbing, electrical, fire sprinkler system, Venetian blinds, incinerator, asphaltic paving; 15,200 sq. ft. floor area. ENGINEER: Joseph Halpern, West Los Angeles. GENERAL CONTRACTOR: Walter & Lee Brown, West Los Angeles.

PRETZEL PLANT, El Segundo, Los Angeles County. American Cone & Pretzel Co., El Segundo, owner. Reinforced concrete tilt-up construction, tapered steel girders, composition roofing, concrete slab, wood roof, steel roll-up doors, plumbing, electrical, loading dock, 2000 sq. ft. of office space; 45,000 sq. ft. asphalt paving. ENGINEER: George Novikoff, Engineers, Los Angeles. GENERAL CONTRACTOR: Co-Ordinated Const., Inc., Hawthorne.

CHURCH & SUNDAY SCHOOL, Campbell, Santa Clara County. Congregational Church of Campbell, owner. Frame and brick veneer and stucco construction, asbestos shingle roof, concrete floors, radiant heating—$161,034. ARCHITECT: Clifford E. Sobey, Los Gatos. GENERAL CONTRACTOR: E. A. Hathaway & Co., San Jose.

ELECTRONICS PLANT ADD'N, San Carlos, San Mateo County. Litton Industries, Inc., San Carlos, owner. 1-story reinforced concrete tilt-up construction; 40,000 sq. ft. floor area, addition to existing building. PLANS: William J. Moran Company, Alhambra. GENERAL CONTRACTOR: William J. Moran Co., Oakland.

ELEMENTARY SCHOOL ADD'N, Placerville, El Dorado County. Placerville Elementary School District, owner. Frame and stucco construction addition to Sierra Elementary School building; 6 classrooms, 2 specialty rooms, toilet rooms —$166,423. ARCHITECT: Raymond R. Franceschi, Sacramento. GENERAL CONTRACTOR: Swendeman & Son, Angels Camp.

SANTA FE SPRINGS SCHOOL, Santa Fe Springs, Los Angeles County. Little Lake School District, Santa Fe Springs, owner. Contains 16 classrooms, 2 kindergartens, administrative unit and multi-purpose unit; reinforced masonry construction, structural steel, built-up roofing, insulation, plastering, slab and asphalt tile floors, acoustical work, sheet metal, heating and ventilating, metal toilet partitions, site grading — $493,000. ARCHITECT: Flewelling & Moody, Los Angeles. GENERAL CONTRACTOR: Burch Construction Company, North Hollywood.

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IN THE NEWS

NEW OFFICE AND WAREHOUSE

Architect John S. Bolles, San Francisco, is completing plans for construction of a 1-story, reinforced concrete and frame office and warehouse building. The building, for Charles Brunning Co, will be in San Francisco.

NEWSPAPER BUILDING

The architectural firm of Gromme, Priestly & Mulvin of San Rafael, is completing drawings for construction of a 2-story addition to the Independent-Journal newspaper office in San Rafael.

APPLY FOR PERMIT TO BUILD SAN FRANCISCO OFFICE

The America Fore, Inc., recently applied for a building permit from the City of San Francisco to construct a 7-story, plus basement garage, office building, on the corner of Pine and Battery Streets, San Francisco.

The new building would be 92 x 160 ft. in area; concrete construction, polished granite, marble, aluminum and glass exterior, 3 elevators, and will cost an estimated $1,855,000.

The firm of Hertzka & Knowles, San Francisco, are the architects.

MODERN APARTMENT IS PLANNED FOR OAKLAND

A building permit has been granted A. P. Russello and Lewis Rosenberg of Oakland for construction of a $200,000 apartment facility to be built at 1555 Madison Street.

The project includes a 3-tory building containing 27 apartments of 95 rooms, and a community swimming pool. Construction will be of frame and stucco and reinforced concrete; basement garage and elevator.

R. Calonico of Oakland is the designer.

HBI SELECTS TWO LIFE MEMBERS

H. Cedric Roberts and Lloyd S. Whaley, two home builders prominent in the development of the San Fernando Valley, Long Beach and other Southern California areas, have been voted life membership on the Board of Directors of the Home Builders Institute of Southern California.

Roberts started his home construction activity in 1923, while Whaley has been building homes in Southern California since 1937. Both are charter members of the organization and have served on the board of directors for 10 consecutive years.

Builder-members of the HBI have constructed 85,000 dwelling units in Los Angeles and Orange Counties during 1955.

PRESCOLITE CORPORATION OFFERS NEW EXIT LIGHTS

A complete line of new "EXIT" lights has been announced by the Prescolite Manufacturing Corp. of Berkeley, California. The lights, available in either single or twin-face models, feature "dielux" diecast frames fabricated from rust-resistant heavy code gauge steel, six-inch letters,

and new concealed hinge for fast, easy relamping and cleaning without the use of tools.

Lights are furnished with red, green, or white glass panels, or metal stencils at same price. Housings are spot-welded for maximum rigidity and wired with two porcelain sockets on removable steel wireway, in which all wiring is concealed. Many styles, all fully approved by Underwriters' Laboratories, Inc. For full information and prices write Prescolite Mfg. Corp., 2229-4th St., Berkeley, California.

SOUTHERN CALIFORNIA CONSTRUCTION HIGHEST

The first eleven months of 1955 saw the construction activity in Southern California pass the 2 billion dollar mark, with every indication that the final month of the year would see the total well past the 2½ billion dollar figure.

The huge total for this year is $196,170,525 greater than for the previous year and is representative of some 74 cities. Unincorporated areas showed a gain similar to southland cities.

COMMISSARY STORE AT HONOLULU

The U.S. Naval Commissary Store, now under construction at Honolulu's Pearl Harbor, will be one of the world's largest super-markets when completed about mid-April.

Pre-cast, tilt-up, concrete construction (it contains 48,000 sq. ft.), it is the largest pre-cast concrete job in the Pacific area and represents a cost of $693,000.

Wimberly & Cook, AIA, with Paul D. Jones, AIA Associate, are the architects, and the Nordic Construction, Ltd., is the builder.

PENNEY STORE FOR CONCORD

Architect John S. Bolles, San Francisco, is completing drawings for construction of a new J. C. Penney Store to be built in

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the Concord Shopping Center.

The new store building will be 2-story, reinforced concrete construction, will contain 53,000 sq. ft. of floor area and cost an approximate $950,000.

SCHOOL BONDS ARE VOTED

Electors of the Vine Hill Elementary School District, Martinez, Contra Costa County, recently approved issuance of $200,000 in school bonds with funds to be used for the construction of a new elementary school and for construction of additions to existing buildings in the district.

An additional amount of $500,000 will be obtained through State Aid for the project.

FLOOR ENGINEER JOINS KALMAN

George Kresa has been appointed sales engineering representative of the Kalman Floor Company in the Los Angeles area, according to an announcement by Fred W. Hill, District Manager of the West Coast office with headquarters in Los Angeles.

Kresa attended grade and high schools in Illinois and studied engineering and mathematics at the University of Dubuque, and has had several years' experience in concrete and industrial floor applications.

LUXURY APARTMENT BUILT AROUND VIEW

The architectural firm of Palmer and Krisel, AIA, Los Angeles, has completed drawings for construction of a luxury apartment house in Bel Air called Nalin Manor.

The site overlooks the city to the south, mountains to the north, and the ocean and Catalina Island to the southwest. The new structure, 2 stories in height, will be divided into two separate units, one rectangular and one L-shaped, so that each of the 22 apartments will have its own view and a private balcony or fenced terrace as well.

Estimated cost of the project is $250,000.

DESIGNS AIRLINE OFFICES

Raymond Loewy, Industrial Designer, has developed an unusual motif for construction of United Air Lines ticket offices in Beverly Hills, Chicago, and Honolulu.

Basic elements of the design are founded on the clean, uncluttered lines of modern aircraft and the new decor will be applied to ticket office construction in cities throughout the air line's system.

In addition to creating pleasant surroundings for travelers, the new styling is designed to reflect the character of the company and its services and provide a system-wide "family" look. Physical advantages include durability and ease of maintenance.

FEDERAL OFFICE BUILDING PLANNED FOR LOS ANGELES

The Federal Bureau of Budget is currently making a study to determine the advisability of constructing a new $15,000,000 federal office building under a lease-purchase plan in the Los Angeles Civic Center.

The exact location has not been announced as yet, however Congress is expected to act upon the appropriation at its next session.

Preliminary plans only will probably be prepared by the General Services Administration, Washington, D.C., and the actual lease-purchase bids will be cleared through the GSA offices in Los Angeles.

MARIPOSA GARDENS SHOPPING CENTER

Structural Engineer J. Y. Young Company of Oakland has been selected by the Capital Company of San Francisco to design a $1,000,000 combination shopping center to be built in Santa Clara for Beckett & Federighi of Oakland.

The new development, called "Mariposa Gardens," will be located at the SW corner of Homestead Road at Layton Avenue.

AIRCRAFT RESEARCH PLANT FACILITIES

The architectural firm of Howell & Arendt of Santa Barbara is completing drawings for construction of a research plant to be built near the Santa Barbara Municipal Airport, Goleta, for the Aerophysics Development Corp.

The research building will contain 55,000 sq. ft. of floor area and administration buildings will have an additional 46,000 sq. ft. of space.

ARCHITECT COMMISSIONED

Architect John C. Warnecke of San Francisco has been commissioned by the Richmond Union High School District to draft plans for construction of the new Loring Junior High School to be built at Loring and Rosaling Streets in Richmond.

Estimated cost of the project is $1,400,000.

ATOMIC RESEARCH LABORATORY

General Electric Company of Schenectady, New York, has purchased site facilities for construction of an Atomic Research Laboratory in Alameda County near the town of Pleasanton.

Some 1658 acres of land have been acquired and GE proposes construction of a small prototype power reactor, radio material laboratory and an experimental physics laboratory at an estimated cost of $5,000,000.

JOE SCOTT BOYS CAMP

Architect Raphael A. Nicolais of Los Angeles has been appointed by the Los Angeles County Board of Supervisors to draft plans for construction of the Joe

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Scott Boys Camp, Capital Project, which includes dormitory, mess hall, recreational building, school administration, maintenance and garage building, scouting building, public toilets and garbage shed.

Estimated cost of the work is $500,000.

CHURCH HALL LIVERMORE

Architect Donald Powers Smith of San Francisco is completing plans for construction of a 1-story 4,000 sq. ft. frame and stucco Parish Hall to be built in the city of Livermore for the Presbyterian Church.

OFFICE AND STORE BLDG.

Architect Ira Marshak of Las Vegas, Nevada, is completing plans for construction of an office and store building to be built in Las Vegas.

The new building will be 2-story, 87 x 60 ft., and will cost an estimated $100,000.

DOG FOOD PLANT

Architect Wallace Alexander of Sacramento is working on drawings for construction of a 1-story, 18,000 sq. ft. reinforced concrete building to be built in Sacramento for the Bonnie Dog Food Company.

SCHOOL SITES APPROVED BY COUNTY PLANNERS

Sites for two junior high schools in the Anaheim Union High School District, Los Angeles County, have been approved by the County Planning Commission.

ARCHITECT BECKET OPENS DALLAS OFFICE

The architectural firm of Welton Becket & Associates recently opened regional offices in Dallas, Texas, making it the seventh branch office of the international architectural and engineering firm.

Charles Gable of Los Angeles will serve as temporary manager of the new offices, with Alfred Peterson, manager of the Kansas City office, assuming management of the Dallas office early in January.

NEW CHURCH FOR SAN MATEO

Architect Donald Powers Smith of San Francisco is completing working drawings for construction of a new Church building in San Mateo for the First Presbyterian Church of San Mateo.

The new structure will be of reinforced concrete and frame construction and will cost an estimated $235,000.

SCHOOL BONDS APPROVED

Voters of the Lincoln Unified School District, near Stockton, recently approved the issuance and sale of $900,000 with funds to be used in the construction of new high school buildings, a new Parkwood Elementary school, Lincoln No. 3, Elementary School, and Village Oaks Elementary School.

Approval was also given to a State Loan of $900,000 to be used in the same projects. Corrough & Wong of Stockton are the architects.

INDUSTRIAL ARTS BUILDING ADDITION

The architectural firm of Corlett & Spackman of San Francisco are working on drawings for the construction of an addition to the Industrial Arts building at the College of Marin in Kentfield, Marin county.

The addition will be a 2-story, frame and stucco building and will cost an estimated $30,000.

WHEELCO INSTRUMENTS APPOINT NEW DEALER

The Grant Edgel Company of Portland, Oregon, has been appointed exclusive representative in the Portland area for Wheelco Industrial Instruments, according to an announcement by R. A. Schoenfeld, Wheelco sales manager, Barber-Colman Company.

APARTMENT HOLLYWOOD

A new 36-unit apartment building for the heart of Hollywood, planned to provide the atmosphere and privacy of a resort hotel, is being built by the George Alexander Company.

Designed by the architectural firm of Palmer and Krisel, A.I.A., the 2-story E-shaped building is so arranged that the

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two wings containing the rooms and suites are set back from the street and shielded from the city lights and traffic by a smaller third wing which in turn contains the foyer and a dramatic jack-knife staircase. A swimming pool is flanked by the main wings of the building, and a large sun-deck provided on the roof.

FOUR MACHINE USES IN ROUTO-JIG

A completely new type, low priced, portable electric tool has just been introduced. Compact and versatile, this machine combines the functions of a jig-saw, router, joiner, and shaper table.

Suitable for builders, carpenters, pattern shop workers, and woodworking shops; as well as other trades where cutting, jointing or shaping of wood, plyboard, composition or plastic is done.

A rectanglar base converts quickly for jig-saw work, while a circular base makes it a router—attached in an inverted position to a shaper table, the tool becomes a shaper and joiner in a matter of seconds; operated by powerful; AC-DC Universal motor; 40-page manual. For prices and literature, write PORTER-CABLE POWER TOOLS, Ltd., P.O. Box 1019, London, Ontario.

SOUTHERN CALIFORNIA HIGHWAY GETS NAME

The California Highway Commission has designatel the projected freeway to be constructed between Los Angeles and Pomona, as the "Pomona Freeway."

Routings for most of the Pomona Freeway have been adopted by the Commission, and when completed the freeway will provide an entirely new highway artery south of the San Bernardino Freeway through an area not now served by an east-west state highway route.

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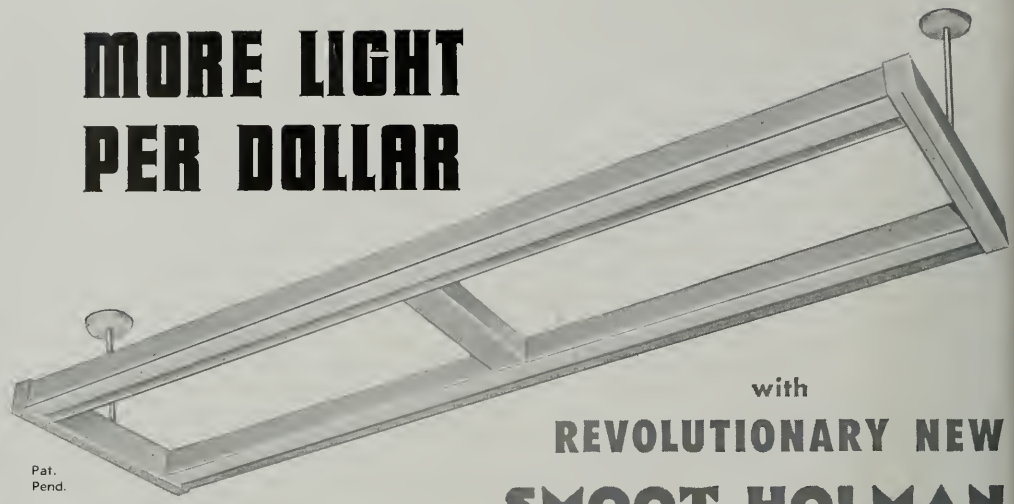
ARCHITECT AND ENGINEER

FEBRUARY, 1956

MORE LIGHT PER DOLLAR



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By all means, investigate this exciting new fixture promptly. The more you know about it, the more use you'll find for it. Its possibilities are limitless. Where shall we send your complimentary file of technical data? Kindly mention this publication and our catalog number, PV-288.

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Vol. 204 No. 2

ARCHITECT AND ENGINEER

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. EDITORIAL NOTES .

FEDERAL SCHOOL CONTROL

The controversy over Federal aid to education centers about the question of Federal control.

Proponents of Federal aid insist that control need not accompany the grants, but, if you assume the Federal government itself was opposed to control, you will find that in education as in all else Federal aid and control are inseparable.

Common reasoning tells you it would be absurd for the Federal government to make a school grant without defining the purpose for which it is to be used. Definition would limit and describe these uses and that in itself is a form of control.

In actuality, precedent is clearly defined; the Federal government has no disposition to avoid control. You could hardly expect it to assume the responsibility for educational projects without assuring itself of the means for carrying that responsibility out.

Nor could you expect it to exercise unselfish restraint in the use of its power. Precedent again shows the normal, human ambitions of officials who want to enhance their own positions make such restraint most improbable.

Thus the case of Federal aid to education without Federal control reduces itself to wishful thinking.

* * *

NEW INDUSTRY DEVELOPMENT

A five point program to help local communities, including depressed areas, build an economic climate which attracts and holds industry, is proposed by the National Chamber in a study recently made public.

The key to the problem lies within local communities and depends upon development of conditions which stimulate and reward business initiative. This should be done without granting special favors to business, and without federal aid.

Essentials of the right economic climate, the study finds, includes labor costs which are not too high to permit competition with business in other parts of the country, good labor relations, fair taxes, sound local government and a friendly attitude towards business. Good schools and attractive living conditions are also important.

As basic steps in a program to create a favorable business climate it is suggested community leaders consider:

1. Make a survey of factors which affect the community's business climate. These would include employer-employe relations, taxes, government services and regulations and education.
2. Enlist community-wide cooperation to correct factors unfavorable to business as disclosed in the survey.
3. Encourage employers to interpret business operations and problems to employes and the public.
4. Attack state-wide problems affecting local business, including restrictive labor laws and burdensome state regulations of business.
5. Work on national policies affecting local business conditions, such as federal corporate tax rates which discourage investment in new business, exemption of unions from the anti-trust laws and federal regulations which harass business.

The above program should be supplemental to any present state and local industrial development programs and not in any sense a substitute for them.

The problem of getting and holding good employers in depressed areas where unemployment is unusually high is "urgent." However, proposals for financial aid from federal government to depressed areas fail to meet the real problem. What is needed is to make sure basic conditions for attracting and holding good employers are present in a community. This job is essentially a local one.

Construction of industrial facilities with the help of federal loans would be of limited value to many depressed areas. If an area is really a sound business location, it is reasonable to expect that employers will move there without federal inducements.

Federal subsidies would tend to become self-perpetuating. High business costs would increase and continue and progressively larger doles would be needed.

The study concludes: "There is real danger that subsidy measures would convert depressed areas into permanent wards of the state, at the expense of communities which have succeeded in building sound economies."

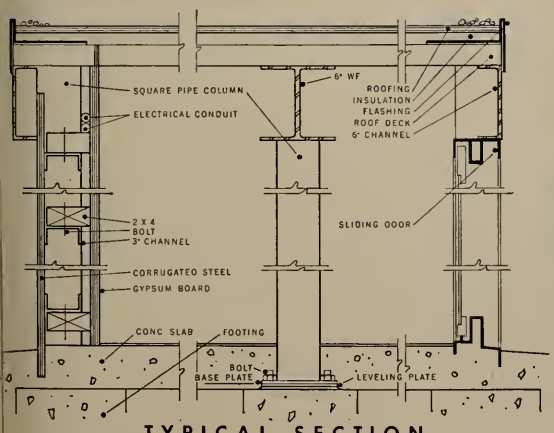
* * *

HOME IMPROVEMENT

This year will be the year to build a patio, add a recreation or new room to your home, or do a complete remodeling and redecoration job, as most of the people in the home improvement industry are emphasizing the possibilities of improving your present property by proper supervised expansion.

The nation-wide movement got underway early in January and is officially known as "Operation Home Improvement—or—'56 . . . is the year to Fix."

Statistics show that despite the building boom of recent years, only about two-fifths of all American homes are in "fair" to "good" shape, and with the prospect that new housing starts may be down somewhat for the year, many firms are out to improve their service and encourage a general fix-up program.



TYPICAL SECTION

ARCHITECTS AND ENGINEERS: We expect to have additional information on the use of steel in residential construction. If you are interested in receiving this, please send us your name and address and we will forward the material as it becomes available. Write: Columbia-Geneva Steel Div., United States Steel Corporation, 120 Montgomery St., San Francisco 6—Architects and Engineers Service.

tern homes of the future are now building with steel... **UNITED STATES STEEL**

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering a variety of special exhibits and events for February, including:

EXHIBITS: Saccaro—An interesting group of selected paintings 1952-56; Original Drawings and Gouache Illustrations by Maynard Dixon for "The Oregon Trail" by Francis Parkman; Black and White Collages by Janet Todd Young; and Paintings by Irma Engel.

SPECIAL EVENTS: Classes in Art Enjoyment—For Adults, Exercises in Clay Modeling and Oil Painting; Painting Workshop for Amateurs, includes painting from the model and still life motifs for the practice of observation and appreciation; and Seminars in the History of Art, informal discussions illustrated by lantern slides, reproductions and original works. For children, there are classes in Picture Making, ages 4-8; Art and Nature, ages 9-11; and the Art Club for students aged 12-15.

The museum is open daily.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an exhibition of Oils by Paul Carey and Samuel Provenzane; Watercolors, by Rollin Pickford, Jr.; and a special exhibition of Original French and Italian Ceramics.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is offering a number of special exhibitions and events for February, including:

EXHIBITIONS: California Watercolor Society, the 35th annual exhibit of this group; Paintings, by Walter Kuhlman; Paintings by Fabrizio Clerici; and Scent Bottles, from the collection of Mr. and Mrs. George Frizzell.

The ACHENBACH FOUNDATION FOR GRAPHIC ARTS is showing a commemorative exhibition of Nicholas Dunphy, and Woodcuts by Jacob Steinhardt at the museum. On Loan Exhibition at the San Francisco Public Library is a special Study of Currier and Ives, and The Passion of Christ, by Old and Modern Masters.

EVENTS: Organ recital every Saturday and Sun-

(See page 30)

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING CIVIC CENTER

APPROACHING

Oil on burlap
37⅞" x 47⅝"

by
FRITZ WINTER
(German)

Included in the Exhibition, "The New Decade", collection of Nelson A. Rockefeller, New York.

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SCOPE OF MILLWORK

(FORM WIC No. 222)

INTRODUCTION: The terms used herein in describing the various materials and items have the meanings as defined in the MANUAL OF MILLWORK, as published by the Woodwork Institute of California in 1953. In the absence of sufficient details or information, all species, grades and kinds of materials, and all work executed, are intended to be in accordance with the Standards of the MANUAL OF MILLWORK and with stock details and methods applicable to the job.

THE SCOPE OF ARCHITECTURAL MILLWORK, SEPARATED INTO APPROPRIATE CATEGORIES, IS:

1. EXTERIOR FRAMES

All frames for all exterior window, sash, door, vent, and access openings of all kinds.

TYPICAL INCLUSIONS: Stiles; jambs; mullions; transom bars; sills; yokes; staff mouldings; blind stops; parting beads; flashing when required attached; attached sill pans; inside and back linings; wood caps; pediments; stops for exterior door frames; attached outside casings; exposed structural mullions; and columns, pilasters, box sills, brackets, corbels, paneling and mouldings when these members form an integral part of the frame design. All exterior frames will be mill built or in sections as large as practicable.

EXCLUDED: any structural wood framing or timbers except as noted; any metal frames, any wood cores for metal frames, or any stopped-in glass.

2. EXTERIOR FINISH

All plain, S4S, and moulded trim required that are detached and not structural in nature.

TYPICAL INCLUSIONS: Cornice moulds, corner and edge boards; fascia; soffits; water tables; outside casing required detached; steel sash surrounds; belt and base courses; balustrades; verge boards; half timber work; parapet railings; treads and risers and trim for exterior stairs; seat and bench parts; columns; beam boxings; false rafters and lookouts when scrolled or turned or carved; turned columns; boxed posts and beams; worked solid posts and beams; corbels; brackets; bolsters; finials; pediments, and the like.

EXCLUDED: any structural wood framing or timbers; any sheathing, siding, decking, or planking; any cant strips; any waste moulds; any lath, shingles, or shakes; any composition, plaster or plastic wall boards or coverings; any exterior boards or battens; any job labor involving adzing, hewing, burning, combing, wire brushing, sand blasting or antiquing; any marble or tile fronts, base, or tops; any bucks, grounds, furring, or trusses; any trellis, fence posts or fence materials where standard stock lumber yard material is used.

3. WINDOWS AND SASH

All windows and sash for all wall and ceiling openings.

TYPICAL INCLUSIONS: Casements; transoms; clerestory sash; awning sash; sliding sash; double-hung windows; and with appropriate stops. (Where sash are furnished open with stops, the stops will be cut for average thickness of glass specified.)

EXCLUDED: metal sash; job fitting; metal skylights; any weatherstripping or milling; (cupboard sash are included in Casework section); any job glazing.

4. DOORS

All wood doors.

TYPICAL INCLUSIONS: Exterior and communicating doors; sound proofed doors; cubby and access doors; gates; wood faced fire doors; wood faced mineral core doors; all wood, metal, or other type louvers for wood doors; and all cut-outs for glass, with appropriate stops.

EXCLUDED: any wood cores for metal clad fireproof doors; garage doors unless specified mill made; any metal doors; any lead lined doors; any cutting of holes for vents, weeps, letter boxes; grills, or hardware not mill furnished; any job fitting; any weatherstripping or fitting for weatherstripping; any hardware; any painting, priming or oiling.

5. MILL GLASS AND GLAZING

All glass and glazing done at the mill.

TYPICAL INCLUSIONS: Glass and shop glazing; mirrors and art glass for shop glazed windows and sash and doors and cabinets and fixtures and other

millwork products; appropriate stops where required; and with all materials in accordance with Section 18 of the MANUAL OF MILLWORK unless otherwise specified.

EXCLUDED: any job glazing; any glass or mirrors for job installation; any plastic or other materials serving the purpose of glass.

6. **INTERIOR JAMBS**

All jambs and jamb sets for all communicating doors; access doors; interior sash and window openings; borrowed lights; all cased openings; and sliding door and sash pockets and applicable hardware.

TYPICAL INCLUSIONS: Stops; jamb linings; and extension jambs when required. All work in this section will be delivered K.D.

EXCLUDED: Any stopped-in glass, metal tracks for sliding glass; or bucks or grounds.

7. **INTERIOR FINISH**

All standing and running plain or moulded trim members required that are detached and not structural in nature.

TYPICAL INCLUSIONS: Flush or planted base; shoe, casing; picture mould; false and boxed beams; ceiling mould; closet shelves and cleats; wood clothes poles and rosettes; mop racks; thresholds; exposed structural mullions; apron; stool; plinth blocks; and all other exposed wood trim not mill assembled.

EXCLUDED: any structural wood framing or timbers except as noted above; any sheathing, siding, decking, or planking; any composition, plaster, or plastic wall boards or coverings; any installation or assembly at the job site; any job labor involving adzing, hewing, burning, combing, wire brushing, sand blasting, or antiquing; any marble or tile; any bucks, grounds, furring, or trusses; any metal.

8. **CABINETS AND CASEWORK**

All cases and cabinet work.

TYPICAL INCLUSIONS: Sink cases; wall cabinets; storage cabinets; wardrobes; pullman cases; counters; booths; display cases; shelving; bars; back-bars; pulpits; altars; pews; assembled railings; built-up bulletin boards; hardware required to be installed during fabrication; shelf standards and supports; track and sheaves for sliding wood sash and sliding wood doors; metal drawer slides; table top fasteners; plywood sub-tops for stainless steel and linoleum and similar materials; and cupboard and cabinet sash.

All work in this section will be mill assembled in sections to go through access openings or knocked down, and marked for job installation.

EXCLUDED: any installation or assembly at the job site; any cutting of holes for job applied vents, weeps, grills; any cutting for job applied hardware; any job labor involving adzing, hewing, burning, combing, wire brushing, sand blasting, or antiquing; any marble or tile fronts, base, or tops; any priming or painting or finishing of any kind; any linoleum, cork, leather, or composition covering of any kind.

9. **PANELING, PLYWOOD AND WOOD BOARDING**

All wood decorative wall coverings.

TYPICAL INCLUSIONS: Wainscoting; wall and ceiling paneling; stair and soffit paneling; paneled jambs; flush veneered wall units; decorative plywood for paneling and wall covering (either softwood or hardwood); exposed wall boarding; paneled beams; and the like.

EXCLUDED: any structural wood framing or timbers; any sheathing or siding; any installation or assembly at the job site; any marble or tile; any composition wall coverings; any job labor involving adzing, hewing, burning, wire brushing, sand blasting, or antiquing; any bucks, grounds, furring.

10. **STAIRWORK**

All interior stairs and stair materials.

TYPICAL INCLUSIONS: Stringers, treads, risers, scotia, starting steps, newels, balustrade rails and crooks, wall rails and crooks, balusters, show rail, fillet, spandrels, skirting, wedges, and all other exposed parts of a stair.

EXCLUDED: rough horses; any structural wood framing or timbers; any open riser plank stairs; any installation or assembly at the job site, unless otherwise specified; any handrail brackets or safety nosings.

11. **SCREENS AND SCREEN DOORS, BLINDS AND SHUTTERS**

All wood screens and screen doors and all blinds and shutters.

TYPICAL INCLUSIONS: All wood framed window and sash screens; porch screens; ventilator screens; screen doors; batten and false type shutters.

EXCLUDED: any hardware; any job fitting; any heavy mesh guard screens; any roller screens; and metal screens.

Screen wire will be 14 x 18 mesh standard galvanized, unless otherwise specified.

12. **LAMINATED PLASTIC**

All decorative laminated plastic for case and counter tops, splashes, walls, and the metal and plastic trim applicable to these items.

TYPICAL INCLUSIONS: Bonding of the plastic to the proper backing, sink rings, metal trim as required, backing sheet or sealer, and job installation when specified.

EXCLUDED: all backing, stripping, furring, and grounds.

(See page 34)

$60 BILLION PREDICTED

CONSTRUCTION IN 1956

WILL CONTINUE AT HIGH LEVEL

Construction, the nation's largest single production activity of the postwar era, is pointed toward its first $60 billion year in 1956, after smashing all previous records for the 10th consecutive year in 1955 when structures of all types were put in place in the continental United States at a valuation of approximately $57 billion.

Far outstripping all predictions in 1955, the gain of $5 billion over the previous year was the most spectacular since 1951, representing an increase of almost 10 percent over the tremendous 1954 performance record.

The total, consisting of an estimated $42.2 billion in new construction and $15 billion in the maintenance and repair of existing facilities, accounted for about 15 percent of the gross national product and more than 15 percent of the country's total employment.

In addition, investment by the federal government in overseas construction, principally in bases for the armed forces and other defense facilities, exceeded $500 million in 1955, according to The Associated General Contractors of America.

BASIC ASSUMPTIONS FOR 1956

The AGCA has divided its estimate of the 1956 potential into $44.5 billion for new construction and $15.5 billion in maintenance and repair work, excluding federal construction overseas. Major factors are anticipation of continuing gains in private non-residential building, more than offsetting a mild decline in housing activity, and of a steadily mounting volume of state and local works of all kinds.

The $60 billion potential is predicated on indications of a continued high level of economic activity, an increasing backlog of construction requirements, and continued large numbers of bond issue approvals; and assumptions of the availability of adequate investment funds, increased production of materials to alleviate shortages, a moderate rise in costs, and no major work stoppages or international complications.

1955 VOLUME UNDERESTIMATED

The dramatic increase in construction during 1955 was substantially underestimated in most major forecasts, ranging from $38.75 billion in new construction to the most optimistic forecast of $40 billion by the A.G.C., which also had estimated total construction at $56 billion.

The scope of the increase is demonstrated by the fact that construction activity, which had reached boom proportions in 1954 while other major segments of the economy were declining, surged even closer to 15 per cent of the gross national product in 1955 when most segments of the national economy were rising markedly. Thus, more than one dollar out of every seven spent for goods and services in the United States was invested in construction.

Further indicating the importance of this segment of the economy, more than 9.8 million persons, or over 15 per cent of the total average employment for the year, were employed directly and indirectly through construction activity. Direct construction employment totaled about 4,750,000, and the remainder were employed in activities servicing construction in the fields of distribution, transportation and manufacturing.

MAJOR CATEGORIES, 1955

The $42.2 billion volume of new construction in 1955 was more than 12 per cent above the revised figure of $37.6 billion recorded for 1954, with private work accounting for most of the increase.

Private outlays totaled an unprecedented $30.1 billion more than 16 per cent over 1954, paced by a 21 per cent increase in residential expenditures to a total of $16.3 billion, reflecting continued favorable mortgage opportunities throughout most of the year. More than 1,300,000 private residential units were placed under construction, second only to the peak year of 1950.

Industrial construction, instead of declining as predicted in all forecasts except that of the A.G.C., climbed 14 per cent to $2.4 billion under the influence of favorable profit positions and market prospects. Commercial construction, passing the $3 billion mark, exceeded 1954 outlays by 38 per cent, and construction expenditures by privately-owned utilities continued in record-breaking proportions of recent years, climbing slightly to $4.5 billion.

In the lesser private categories, religious construction increased 25 per cent to $740 million and others with the exception of educational rose steadily, offsetting a 10 per cent decline in farm construction, which has dropped continuously since its peak year in 1952.

LOCAL PUBLIC WORKS MOUNT

State and local public works increased their dominance in the public construction field, accounting for 70 per cent of the $12.1 billion public construction total, compared with 65 per cent in 1954. These categories accounted for the 2.5 per cent public construction increase over last year's volume, more than offsetting a drastic reduction in federal atomic energy facility construction, and a continued decline in conservation and development.

Public education outlays increased 15 per cent to $2.5 billion, and federal studies indicated 66,300 classrooms would be completed during the current school year, as compared with 60,000 in the 1954-55 period. Highway construction rose 9 per cent to $4.1 billion, and the provision of sewerage and water facilities increased by 10 per cent, topping $1 billion for the first time.

1956 OUTLOOK BY TYPES

The high level of construction under way at the end of 1955 provides a strong thrust for a large volume in 1956. While the rate of residential starts has begun tapering off, the outlook is bright for practically all major categories of non-residential construction.

The $44.5 billion potential of new construction should consist of about $31.1 billion in private work, an increase of more than 3 per cent, and $13.4 billion in public construction, a gain of almost 11 per cent over 1955. In the private categories, the commercial and industrial volume outlooks are brightest, while state and local public works are expected to continue their ascent in the public total.

Residential—Private residential expenditures, which rose heavily in 1955 under the influence of new family formations and easy mortgage credit, may fall slightly to around $16 billion as the result of a general tightening in money supply and steps taken by the government to curb credit. A somewhat similar situation in 1951 resulted in a moderate reduction in the number of dwellings placed under construction from the peak year of 1950. However, any early easing of mortgage opportunities in 1956 could sustain the current high level of residential construction, thereby increasing total construction volume.

Business—Projection of plans for plant and equipment expenditures into the first quarter of 1956 at the record-breaking rate of $31.5 billion a year strengthens possibilities that industrial construction will increase 17 per cent to about $2.8 billion, and that commercial construction will approach $3.8 billion, an increase of about 23 per cent over 1955.

Among factors influencing industrial volume are the mammoth long-range expansion program of the steel industry and other expansion and modernization plans by such groups as cement chemicals and automobiles.

Booming commercial construction will continue to be influenced heavily by service and shopping needs of mushrooming residential communities in the suburbs. While store remodeling and modernization may level off, the growth in new store construction should increase. For example, the National Association of Retail Grocers expects its members alone to build at least 10,000 new stores in 1956—about 2,700 more than they constructed in 1955.

Privately-owned public utilities are expected to maintain their large volume of improvement and expansion expenditures of recent years, at the rate of about $4.5 billion. Within this group, the largest increase is expected in railroads which apparently have planned new improvement programs after a two-year decline.

Other Private — In the lesser categories, religious construction, which increased 25 per cent in 1955, is expected to rise by another 22 per cent to $900 million. Modest increases may occur in social, recreational, hospital and institutional, and miscellaneous private construction. The darkest spot in the private categories is farm construction, which may continue a decline of 8 per cent to $1.3 billion, based on declining income.

Federal—Further decreases in federal construction expenditures are anticipated by the government, prin-

(See page 32)

RULE No. 15

NEW WEST COAST LUMBER GRADES

By H. V. SIMPSON
Executive Vice-President
West Coast Lumbermen's Ass'n.

It is expected within the next 60 days West Coast lumber will be graded under a new rule—Rule #15.

An attempt has been made to write a rule which the purchaser of lumber can readily understand.

The actual change in the grades themselves is minor. You get in each grade just about what you have been getting in the past.

The principal change is a change from grade numbers to grade names. There are only four things to remember:

#1 becomes CONSTRUCTION.

#2 becomes STANDARD.

#3 becomes UTILITY.

#4 becomes ECONOMY.

We believe we can no longer continue practices which make the merchandising of lumber less orderly and less responsible than the merchandising of other building products. Most lumbermen choose to sell the grades they buy. But they are hampered by the reluctance of the consumer to purchase a "third grade" product for a home which he visualizes as "first grade" in every respect.

The demand for grade-stamping is steadily increasing, and is coming from retail dealers, government agencies, builders and many others.

A number of areas have already refused to accept anything but grade-stamped lumber. This trend has the endorsement of West Coast lumber manufacturers.

Thirty years ago the National Lumber Manufacturers Association adopted a resolution supporting

(See page 33)

A GARAGE . . . BECOMES A HOME

PASADENA, CALIFORNIA

ELMER GREY
ARCHITECT

C. B. STRATTON
GENERAL CONTRACTOR

MRS. CLARA PECK CAULFIELD
Owner

ABOVE: Is shown the original, plain, garage building design.

Well constructed private garage, originally designed to provide limited living facilities above the car area, has been re-designed and remodeled by the architect to make available much greater and more comfortable living space.

One bedroom, a modern bath and a spacious porch, with a new outside stairway leading to the upper floor has been added.

BELOW: Is pictured the same building redesigned for much greater living area by the addition of a bedroom and a porch, also outside stairway.

Below the new bedroom is a large storeroom, and the lower porch includes space for storage of fire wood.

OFFICIALS' HOUSING

VIII WINTER OLYMPIC GAMES

SQUAW VALLEY, CALIFORNIA

—1960—

A small Italian mountain resort in the Dolomites, 100 miles north of Venice, was last month the scene of important decisions for California and the West. On January 25th, the International Olympic Committee, meeting at Cortina d'Ampezzo, heard a formal progress report from the California delegation responsible for staging the VIIIth Winter Olympic Games at Squaw Valley in 1960. Subsequent press reports indicate that international committee members were "impressed" by the presentation and, subject to appropriation of adequate financing, "entirely convinced" that California was willing and able to put on the Games as scheduled.

This reaction represented an important milestone for California Olympic prospects and; incidentally, the successful culmination of a year's work for the San Francisco firm of Malone & Hooper, who first commenced work on this project in the early spring of 1955. At that time Squaw Valley, thanks to its magnificent natural facilities and the efforts of Alexander Cushing, president of the Squaw Valley Development Company, had just been named official United States candidate for the 1960 Winter Games. In June of that year, Cushing faced the immensely greater task of presenting Squaw Valley's case before the International Olympic Committee in Paris—in competition with the oldest and most celebrated winter sports centers of Europe.

For this meeting Squaw Valley, blessed with unsurpassed ski slopes but lacking virtually all other

ARCHITECTS:

MALONE & HOOPER, San Francisco

Partners: Adrian H. Malone, AIA
Roger F. Hooper, Jr.

Project Architect:

Gordon A. Phillips, AIA

Renederings: John F. Grim

CONSULTING ENGINEER for STRUCTURE:

John E. Brown, CE, San Francisco

CONSULTING ENGINEER for SITE WORK:

Wilsey & Ham, CE, Millbrae, California

John E. Brown, CE, (left); Gordon A. Phillips, AIA, Project Architect, Malone & Hooper; Roger F. Hooper, Jr.; and Adrian H. Malone, AIA, Architect.

Olympic facilities, needed a building program—and for this work, Architect Adrian Malone was called to Squaw Valley in March, 1955. In the course of the following three months, sufficient research was done by his firm on this unique problem to permit determination of the major facilities required and their basic relationships in the Valley. Rough studies were made also of a stadium for ice rink events, from which watercolor renderings were prepared by artist Jack Finnegan of Palo Alto, California. These efforts were incorporated in a 6x12 foot topographical model, made by Rudolph G. Theurkauf of Sausalito and exhibited in the American Embassy at Paris, and in an elaborate book, produced in San Francisco and distributed to all international Olympic delegates prior to the Paris meeting.

Following the victory in Paris it became necessary to proceed at once to preparation of preliminary plans for what had become a definite, if long range, building project. For this purpose Malone and Hooper formed an association with John E. Brown of San Francisco, consulting engineer for structural work, and with the firm of Wilsey and Ham of Millbrae, civil engineers, for site work. Arrangements were made with Civil Engineer Charles O. Greenwood, Jr., of Sacramento for complete areial surveys of the site—work which kept his crews in the Valley well into last Autumn.

In the next phase of the work, undertaken for the newly constituted Organizing Committee for the 1960 Winter Olympics, design work was started on the major structures necessary to a complete Olympic facility. Results are illustrated by the sketches which accompany this article—reproductions of the renderings presented to the International Olympic Committee by Adrian Malone in Cortina last month.

By way of comment on these designs, it should be noted, first, that the program includes both temporary and permanent facilities. The objective of the architects has therefore been twofold. In the case of the temporary structures, including public pavilions (christened "Snowflakes") and ice stadium the symbolic and festival character of the buildings can and should predominate; the objective has been not only to design each facility to fulfill efficiently and economically its specific function, but to create bold and exciting forms that will fill the eye and be remembered. To these forms will be added bright colors, interesting

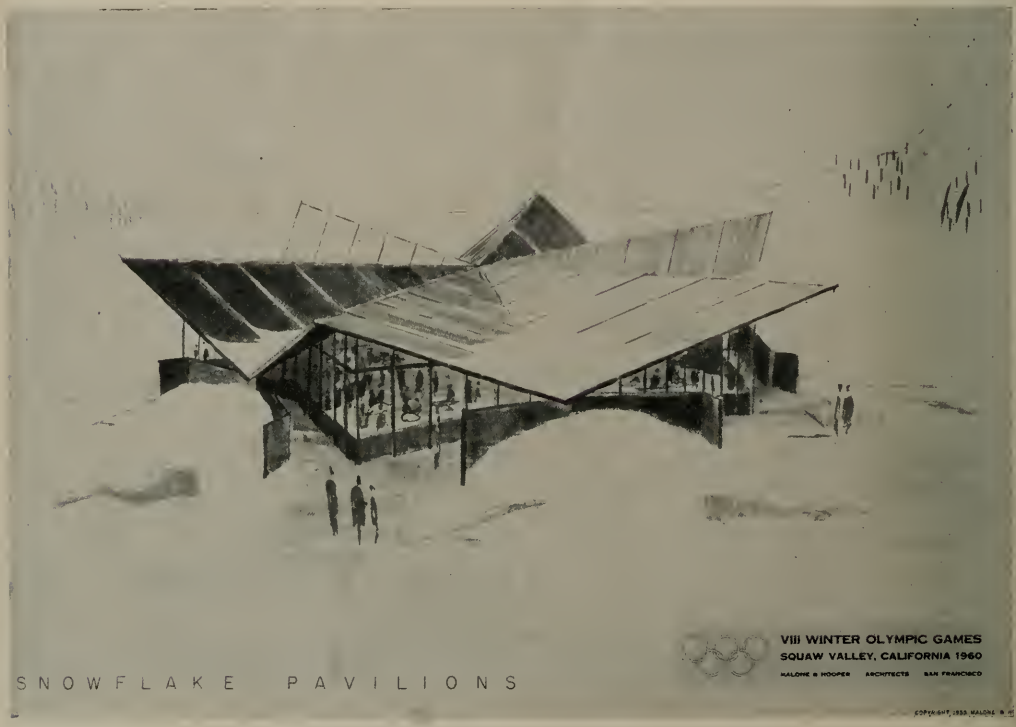
ATHLETES' HOUSING

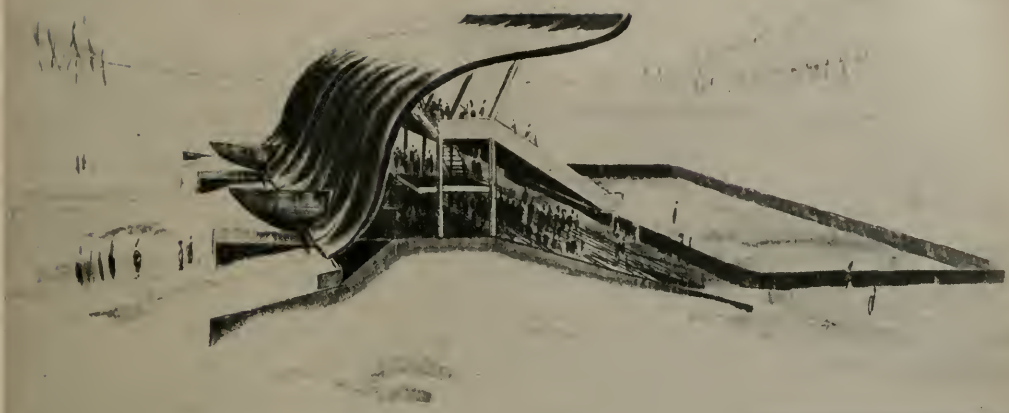
surfaces, dramatic lighting: a gay and fitting background for the queen of winter sports festivals. The permanent buildings have been designed in a quieter vein: sturdy wood structures in character with local building traditions and their mountain surroundings.

Focus of the Olympic scene at Squaw Valley in the winter of 1960 will be grandstand and roof canopy of the Olympic Ice Stadium. Designed primarily for the ice hockey and figure skating competitions, the Stadium overlooks also a wider arc of level ground on which the opening and closing Olympic ceremonies will be held. The sweeping roof of welded steel and laminated wood is designed for minimum interference with vision and maximum protection from prevailing winds and snowfall. At its lower edge the curve flattens to enclose the main lateral concourse at ground level. The top edge curves abruptly back to minimize the possibility of icicle formation over the seating areas. Located under the main grandstand are all facilities necessary to the various competitions on ice: dressing, shower, rubbing and toilet rooms for competitors and officials, equipment storage rooms, and space for refrigeration machinery and snow removal equipment. Public facilities include rest rooms and concession areas. A first aid station will serve both public and contestants.

The public pavilions, of which five are planned at strategic locations throughout the site, are designed to provide, under their dominant broken roofs, the combined services of information centers, snack bars, rest rooms, and heated lounge areas. The unique plan and structural system are calculated to provide maximum unobstructed shelter area within a minimum perimeter and with easy access from all directions. The roof shape will serve also to concentrate snow in the valleys and carry it clear of the entrances at points where access and view are not affected. Inside, the main lounge and eating areas are located under the high points of the roofs, where high glass walls will afford sweeping views of the surrounding ski slopes.

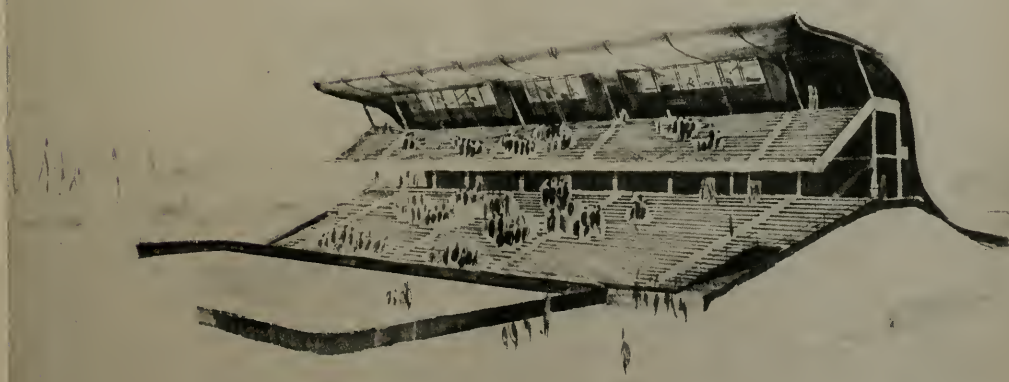
In their aggregate, the new buildings at Squaw Valley will comprise, for the first time in the history of the Games, a complete Olympic plant built for the specific purpose—a complex of structures designed, constructed, and seen as a unified group. The program has presented the architects and engineers with an unprecedented challenge and opportunity.





VIII WINTER OLYMPIC GA
SQUAW VALLEY, CALIFORNIA
MALONE & HOOPER ARCHITECTS SAN FRA

OLYMPIC ICE STADIUM



VIII WINTER OLYMPIC GA
SQUAW VALLEY, CALIFORNIA
MALONE & HOOPER ARCHITECTS SAN FRA

OLYMPIC ICE STADIUM

LOW, SWEEPING LINES *feature this well-designed hillside home.*

OREGON HILLSIDES INFLUENCE ARCHITECTURAL STYLING

Residence of: MR. AND MRS. PHIL TILLMAN
Eugene, Oregon

By ARTHUR W. PRIAULX

JOHN LAURIN REYNOLDS, A.I.A. Architect

Almost every one of the major cities of western Oregon has distinctive topographical features which endear them to the architectural profession and are provocative of some extraordinary design developments in this state's thousands of recently-built contemporary homes.

These cities all have one thing in common, they have rolling hills nearby or within the cities which offer ideal residential building sites well above the valley floor. Another common denominator is the universal backdrop of the breathtaking Cascade Mountain range running north and south through the entire state.

Architects have a continuous field day adapting their contemporary design ideas to these challenging sites so as to exploit to the fullest the natural beauty of terrain. Most Oregon architects find themselves in the enviable position of being able to pick and choose between several natural attributes in each site.

These Oregon hillsides, generally covered with the native Douglas fir trees, which tower upwards for a hundred or two feet, seem ideal for the maximum development of the contemporary home design. Probably no one of the several popular contemporary stylings has been adapted with so many pleasing and thrilling variations as the rambling ranch house.

Eugene architect John Laurin Reynolds seems to have a particular skill in designing homes which belong to these hillside sites. They become a part of the hill, not a foreign intruder, and snuggle cozily into each specific location.

One of Reynolds' most remarkable hillside homes is the beautiful, rambling ranch-type residence he designed for Mr. and Mrs. Phil Tillman. Located just above the clubhouse of the attractive Laurelhurst golf course and well within the city limits, from its vantage point a spectacular view is had of the entire city of Eugene and the upper Willamette Valley.

The home fits the site and the hillside was made for the home. The residence occupies a saddle on a hogback which runs up a long hill, so that there is a free view north and south and west with the hill to the back. An oak grove was left undisturbed and the home nestles in and around the trees.

SECLUDED INNER COURTYARD—Floor plan gives suggestion of home enveloping this outdoor garden spot.

Oregon

BOY'S ROOM: designed to endure hard usage.

GIRL'S ROOM: with separate areas and built-ins.

The Tillman residence has an unusual floor plan which was dictated by the desire of Architect Reynolds to exploit the site to the best possible advantage. In the shape of the letter H, with the lower legs of the H spread, the home is wonderfully efficient.

One wing, on the uphill side, contains master bedroom and bedrooms for a son and two daughters. This wing seems to anchor the home to the saddle. Another wing contains kitchen, dining and family rooms and seems to peek out over the edge of the sloping hill onto the valley below. The wings are connected with an unusual section which appears almost like a massive hallway or corridor. From this hallway joining section opens a formalized living room which faces on an interior garden and lawns among the oaks. Adjoining the living room toward the bedroom wing is a guest room.

All rooms of this lovely home have a sweeping view of one of several panoramas of city, gardens, or hillside.

An outstanding feature of the Tillman residence is the entrance in the connecting hallway. When the great door is opened the visitor gets a breathtaking view of the inner garden seen through a wall of glass windows which form one wall of the hallway-corridor as it leads into the kitchen-family room wing.

This home might well be called the hemlock and cedar home, for Reynolds has used west coast hemlock and western red cedar profusely in every room, for paneling, built-ins, cupboards, storage units, wardrobe and dressing table installations. The exterior has been finished in western red cedar in boards-and-batten pattern and the warm autumn colorings of this softwood have been used to advantage throughout the home in contrast to the richer, golden yellow colorings of the hemlock.

In the main entrance, for instance, cedar has been used for the ceilings and for storage cupboards and

FORMAL LIVING ROOM, in the middle section of the home, has been designed to carry out the "ranch" theme. Stone fireplace with cedar paneling and builtins accentuate informality.

CHEF'S CORNER: Is a popular work spot in this kitchen. Over top of snack bar, chef always has view of inner garden.

walls and the combination of cedar with flagstone hall floor and stone abutments coming through the wall on either side of the entrance is most charming and informal. Cedar was also used for the ceiling and walls of the master bedroom, for paneling in the guest room and along one wall of the living room. A cedar walk-in closet seven feet tall serves as a breakfront or false wall between the living room and the main hall.

Hemlock has been worked effectively in the very charming and efficient kitchen and in the family room where durability and resistance to knocks and knicks is a prime requirement.

Beneath the kitchen wing is a large basement which houses heating unit, laundry and an oversize playroom where the kids can take bicycles or other heavy equipment during the rainy winter months.

The wings blend in so smoothly with the center bar of the H that the home apears as a crescent-shaped structure when approached from the front entrance. It is single story, low and rambling and has a cheerful and homey atmosphere.

An interesting featurc is the carport, one wall of which has been turned into a veritable gardener's haven. Here in this all-cedar unit, provision has been made for storage compartments for all the gardening

WALLS OF GLASS have been used effectively to wed the interior to the attractive outdoors. Buffet corner is by breakfast nook.

tools, including power lawn mowers. One floor-level compartment was designed as a snug port for the children's bicycles out of the way of the big folks' cars.

A flagstone-floored patio has been built adjoining the living room and can be viewed from a window wall along the kitchen corridor. It faces the lovely Sherwood forest of oaks and their natural park surroundings. A common roof line which covers the entire conecting section of the home also adds fall and winter protection to the patio.

The kitchen and family room wing has been designed for easy and informal living. The high, snack-bar divider sets off the kitchen from the long corridor and is handy to the dining area just across the corridor, or to the family room for late dinners or evening snacks when the family is watching television.

A clever bit of designing went into a four-sided free section which separates kitchen and family room. Facing the kitchen, the unit provides storage for kitchenware and china. One wall which faces the family room contains a concealed bar. The bar counter is built into the lower half of a Dutch door. The top half can be opened inward so that bar server has room to work inside. The bar is complete down to a portable refrigeration unit. The third wall of this unique unit is a complete music wall, with television, hi-fidelity and radio all built in. The television set can be swung free of the wall for viewing from any direction in the large family room, contains storage shelves and compartments for odds and ends of kitchen gear.

This home is probably most noticed for its endless variety of storage units built into the walls. For instance, in the master bedroom, a compact, two-sided storage divider wall separates bedroom proper from bath and dressing areas. This divider wall which is about seven feet high contains storage for bed linens and comforters on the bedroom side, as well as small shelving for books, magazines and radio. Facing the dressing room the unit becomes a spacious walk-in wardrobe with separate compartments for husband and wife. All of these units were built of hemlock. Sliding doors give easy access to the wardrobes. Father and mother dressing tables, one with tip-down mir-

MAGIC four-way storage unit separates kitchen and family room. Note, kitchen storage shelving on right, music wall facing, and out-of-sight is bar and more storage area.

ror, are far enough apart so each can dress without interfering with the other.

A master light-control panel in one end of the room divider in the master bedroom gives centralized control of all lights in the home. If a light is on in any room, a red pilot light shows up. Mr. and Mrs. Tillman can turn off all lights in the house from this central switch. An inter-communication system is a step-saver and can be worked independently between any two rooms of the home.

A twin bedroom has been designed to accommodate the two daughters of the Tillman family. Identical built-in units contain study table, shelves for books, dolls and toys, and clothes closet or wardrobe. The study-table desk is built right into the unit and has kneehole space below. A narrow cabinet has been built halfway along one wall and separates the beds of the two girls to give each some privacy. The cabinet at the head of each bed contains study lamp, book shelf, cork bulletin board and storage space in the ends for card tables and large flat items.

Cedar and stone have been used effectively in the living room to give an atmosphere of elegance and well being. A massive stone fireplace wall is flanked by a cedar lowboy with simple shelves for books above.

Keynote of this most interesting residence is the impressive simplicity of the design coupled with the studied functionalism of every room and every installation. There is nothing formal about this fine example of contemporary design, excepting possibly the living room, and even in this area the interrelated use of rock and cedar creates a pleasing informality.

The Tillman home has been designed to live in and to give the maximum livability to a healthy and active and very typical American family. There are no useless gimracks intended only for ornament. Reynolds has achieved much of his effect from complete simplicity of design and form. An example is the feeling of outstretched welcome at the main entrance where the wings seem to surround one with friendliness. The low and sweeping lines of this ranch-type home lack any suggestion of stiffness or the austere. The wedding of home and site is perfect. The intelligent use of native materials—warm and friendly cedar siding, natural rock, cedar shingles and open areas of glass sections and walls — ties this home to its surroundings. There is no shocking jar where home meets garden or patio joins with the miniature forest of oaks. There is a rapport here and product of some mighty careful planning and a warm understanding on the part of Reynolds of the affinity between the finished home and its environment.

A noticeable feature of the Tillman residence is

(See page 33)

LARGE TWO-CAR CARPORT

Occupying one wing, serves a double duty; as gardener's headquorters, with storage wall handy for tools, equipment and supplies.

NEW $1,175,000 Allstate Insurance Company Regional Office Building

SUBURBAN OFFICE BUILDING

PASADENA, CALIFORNIA

ARCHITECTS:

Stiles and Robert Clements

GENERAL CONTRACTOR:

Steed Brothers

Designed by architects Stiles and Robert Clements of Los Angeles, the new $1,175,000 suburban office building of the Allstate Insurance Company, 600 Sierra Madre Villa avenue in Pasadena, was constructed by Steed Brothers of Alhambra, general contractors.

The building, which will initially house 350 employes, was designed for a regional office serving several counties in California. Complete facilities are available for the Allstate branch to operate almost as if it were a little insurance company in itself according to C. J. Weiss, assistant vice president and resident manager of the Pasadena regional office.

The million-dollar brick and stone office building contains 74,160 sq. ft. of working space on the first floor and a lower level designed to fit the rolling contour of the building site. It is completely air conditioned and fluorescent lighted throughout. Acoustical tile ceilings reduce office noises. Asphalt tile provides an attractive and easily maintained flooring.

A cafeteria seating 270 has an exterior wall of glass to allow dining employes to enjoy the view of an exterior patio and landscaped area. The patio may be used for outdoor dining during pleasant weather. Off-street parking for 362 cars is provided on the completely landscaped grounds.

INNOVATIONS CUT CONSTRUCTION TIME

PAPER BOX FORMS USED IN BUILDING LARGE WAREHOUSE

Architects, Contractors and Engineers Join Effort at Los Angeles, California

A new building system developed by a team of architectural, contracting and engineering firms has, on its first application, yielded substantial savings in both construction time and costs. The system was used in erecting an immense Los Angeles warehouse located at 3430 South La Brea Avenue and occupied by the Thrifty Drug Company. A two-story structure, it contains almost eight acres of floor space.

The normal cost of a conventional warehouse of this size would have exceeded the owner's limited budget by more than $200,000. However, through intensive research, planning and, above all, teamwork, it was found possible to keep the cost for the completed shell of the structure down to $2.77 a square foot. An additional $1.25 a foot was spent on the finish and some fairly elaborate mechanical installations including elevators and a spur track.

The architectural member of the team which devised the novel method of new construction was the well known Los Angeles firm of Albert C. Martin and Associates. The general contractor, working as a team member and contributing substantially in know-how and experience, was the William Simpson Construction Company of Los Angeles, and in addition the services of several outstanding specialized engineering firms were retained.

Perhaps the most important of the innovations making the extremely low construction cost possible was the handling of the second-floor slab. But several other features certainly helped. Among them were the precast concrete wall panels; the columns of tubular steel rolled square and filled with concrete and used to support the second-floor slabs; the flange columns to support the steel roof framing; and the roofing itself, which was composed of gypsum poured on insulation formboard.

Important as these factors were in the final net result, however, it was the unique system worked out for handling the second-floor slabs which was probably the most decisive element in the construction of the building. Prior to the architect's and contractor's extensive research, a conventional design had been submitted and rejected as too costly, and for a time the entire project was held in abeyance and appeared to be doomed.

The system which was finally approved, in which the Martin and Simpson firms collaborated, combines several construction and engineering techniques. A notable one is the technique of designing concrete slabs through photo-reflective stress analysis of a scale model, a process recently developed by the Presan Corporation. This helped to determine an acceptable design with the maximum of strength for the minimum of weight and material.

Then, in collaboration with the California Container Corporation, the Simpson Construction Co., by actually forming and pouring various sample slabs at their warehouse, devised a method of using cardboard boxes with egg-crate inserts to form the second floor slabs which are of coffered design. While similar methods had been used before, several new unique methods were introduced by the Simpson organization and applied on the Thrifty warehouse job.

Finally, the Vagtborg Lift-Slab Corporation was retained to raise the precast second floor slabs into place. Coordination of all these techniques brought the costs down to a level within the owner's cost limits, and construction proceeded.

The cardboard forms, made to order, were delivered flat and were readily assembled on the job. Placed in position for pouring, they easily bore the weight of all necessary equipment. Ready-mixed concrete was poured from a bucket swung on a crane.

One of the particular advantages of the system is that many of the cardboard forms fall out as the concrete dries. The remainder can easily be stripped. The finish of the concrete thus exposed is unusually smooth.

When completed and lifted into place, the slabs have the appearance, from below, of a vast waffle. In the Thrifty Drug warehouse, there are 22 such slabs, with an average area of about 7000 square feet each.

Because of the smooth finish and attractive pattern, the underside of the slabs require no additional finish. Also, the design has good acoustic qualities. But, most important of all are its load-bearing and clear-span properties—crucial factors in warehouse design. In the Thrifty warehouse, the first-floor columns are 24 feet apart, yet the second floor can support live loads of 200 pounds per square foot.

In solving the many construction problems presented by the project, the William Simpson Company had to call on all its 76 years of experience. Fortunately, the company possessed a background adequate to the demands made upon it.

Another very important factor in the Thrifty warehouse construction was the fact that the owners had the great advantage of early consultations with the architects as well as the construction firm—a practice which if more frequently used by others would result in considerable savings. It was such factors as these which made the job possible.

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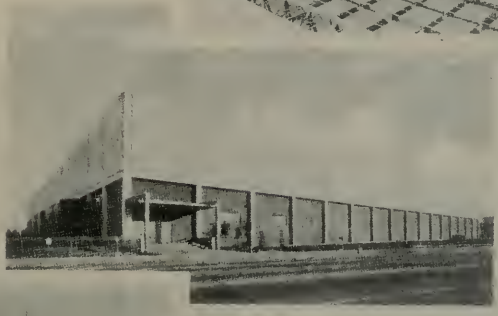

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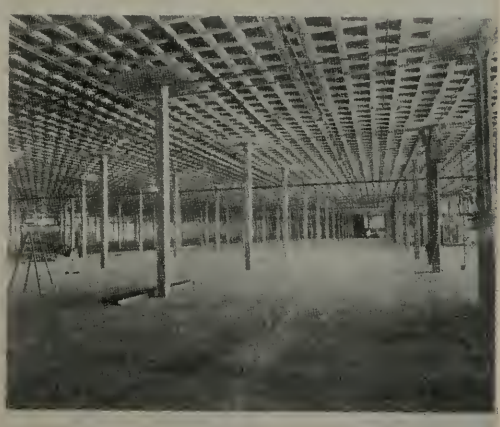


4.

PAPER BOXES (1) create forms for second-floor slab; delivered flat and assembled on job. POURING CONCRETE (2) at grade level for second-floor slab, using bucket swung on crane. LIFT-SLAB (3) method raises slab from grade to second-floor level; egg crate inserts of paperbox forms visable below. FINISHED SLAB (4) from below has handsome and functional coffered design with good acoustic, load bearing and clean span properties; columns are 24 feet apart, floor above supports live load of 200 lbs. per sq. in. Pictured in center is completed building.

American Institute of Architects

George Bain Cummings, President

Earl T. Heitschmidt, 1st Vice President — Edward L. Wilson, Secretary
John Noble Richards, 2nd Vice President — Leon Chatelain, Jr., Treasurer
Edmund R. Purves, Executive Secretary

National Headquarters—1735 New York Avenue, N. W., Washington, D. C.

REGIONAL DIRECTORS — **Northwest District,** Donald J. Stewart, Portland, Oregon; **Western Mountain District,** Bradley P. Kidder, Santa Fe, New Mexico; **California-Nevada-Hawaii District,** Donald Beach Kirby, San Francisco, Calif.

Arizona Chapter:
Ralph Haver, President; Frederic O'Knipe, Vice President; James Elmore, Secretary; Jos. T. Joesler, Treasurer. Executive Committee: Ralph Haver, Jas. Elmore, Gordon Luepke, Richard Drover, Lew Place. Office of Sec., Phoenix, Arizona.

Coast Valleys Chapter:
L. F. Richards, President, Santa Clara; Birge Clark, Vice-president, Palo Alto; Ted Chamberlain, Secretary, San Jose; Russ Williams, Treasurer, Palo Alto; Paul Huston, Palo Alto, and Frank Treseder, Directors. Office Chapter, 363 Park Ave., San Jose 10.

Central Valley of California:
Edward H. de Wolf (Stockton), President; Whitson Cox (Sacramento), Vice-President; Joe Jozens (Sacramento), Secretary; Albert M. Dreyfuss (Sacramento), Treasurer. Directors: Doyt Early (Sacramento), Jack Whipple (Stockton). Office of Secty., 914 11th St., Sacramento.

Colorado Chapter:
Casper F. Hegner, President; C. Gordon Sweet, Vice President; Norton Polivnick, Secretary; Richard Williams, Treasurer. Directors: James M. Hunter, Robert K. Fuller, Edward L. Bunts. Office of Secy., 1225 Bannock St., Denver, Colorado.

East Bay Chapter:
Andrew P. Anderson, President; Harry Clausen, Vice-President; Robert W. Campini, Secretary; Hachiro Yuasa, Treasurer. Directors: George T. Kern, Joe Rae Harper, Roger Y. Lee, Frank B. Hunt. Office of Secty., 6848 Outlook Ave., Oakland 5.

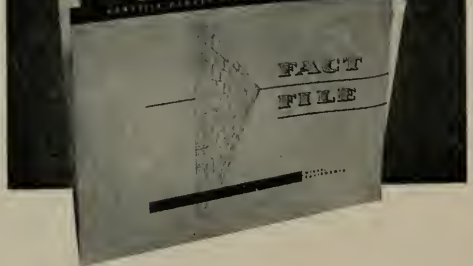
Idaho Chapter:
C. V. Wayland, Boise, President; Cecil E. Jones, Twin Falls, Vice-President; Thomas M. I. Leake, Boise, Sec.-Treas.; Anton Dropping, Boise, Exec. Comm. Member. Office of Secretary, Suite 405, Sun Bldg., Boise.

Monterey Bay Chapter:
William D. Concolino, Jr., President; Wallace Holm, Vice President; Fred Keeble, Secretary; William Cranston, Treasurer. Delegates to the Council are Mr. Concolino and Mr. Holm.

Montana Chapter:
William J. Hess, President (Great Falls); John E. Toohey, Vice-President (Billings); H. C. Cheever, Sec.-Treas. (Bozeman). Directors: Oscar J. Ballas, Wm. J. Hess, John E. Toohey. Office of Secy., Bozeman, Montana.

Nevada Chapters:
RENO: David Vhay, President; Edward S. Parsons, Vice-President; George L. F. O'Brien, Secretary; Ralph Casazza, Treasurer. Directors: David Vhay, Edward S. Parsons, M. DeWitt Grow, John Crider, Lawrence Gulling. Office of President, 131 W. 2nd St., Reno.
LAS VEGAS: Walter F. Zick, President; Aloysius McDonald, Vice-President; Edward B. Hendricks, Sec.-Treas.; Directors: Walter F. Zick, Edward Hendricks, Charles E. Cox. Office of Secy., 106 S. Main St., Las Vegas.

Nevada State Board of Architects:
L. A. Ferris, Chairman; Aloysius McDonald, Sec.-Treas. Members: Russell Mills (Reno), Edward S. Parsons (Reno), Richard R. Stadelman (Las Vegas). Office 1420 S. 5th St., Las Vegas.



"Which Type of Wall Is the Best Investment?"

Let us send you our new Fact Sheet answering that question. Dealing specifically with Commercial Kitchens and food handling areas, it compares 10-year costs of three commonly-used types of walls, shows the savings offered by Kraftile Glazed Structural Wall Units.

This Fact Sheet is one of a series in our Fact File Service. If you haven't our Fact File file folder and previously issued fact sheet on Washrooms, Toilets, etc., we'll gladly send it and put your name on our mailing list to receive future fact sheets as issued.

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REGIONAL NORTHWEST AIA CONFERENCE

The fifth Annual Regional Conference of The American Institute of Architects will be held in Tacoma, Washington, at the Winthrop Hotel, September 7-9, according to a recent announcement.

DISTINGUISHED DESIGNERS AT ARCHITECTURAL SCHOOL

Two distinguished contemporary designers, Louis I. Kahn, Professor of Architecture at the University of Pennsylvania, and Edgar Kaufmann, Jr., of the Museum of Modern Art, New York City, will teach during the spring term at the School of Architecture and Planning at the Massachusetts Institute of Technology.

Both appointments were made possible by funds granted to MIT in 1938 from the Albert Farwell Bemis Charity Trust, and were announced by Dean Pietro Bellauschi.

SOUTHWEST WASHINGTON CHAPTER

Dr. Harlan P. McNutt, M.D. (Psychiatrist) was the principal speaker at a recent meeting of the Chapter held in Scotty's Restaurant, Tacoma. His subject was "Reaction of Children to Contemporary Schools." Waldo Christensen, AIA Regional Director was also in attendance and spoke on A.I.A. activities.

New Members: Corporate, Earl E. Iverson and Hubert Bisson, Tacoma; Richard Murray, Robert T. Olson, and Gerald J. Peters, Olympia. Junior As-

Northern California Chapter:
Wayne Hertzka, President; Wm. Stephen Allen, Vice-President; Rex Whitaker Allen, Secretary; C. Morrison Stephens, Treasurer; and Directors: Wm. Corlett, Robert Kitchen and Bernard Saroff. Executive Secy., May B. Hipshman. Chapter Offices, 26 O'Farrell St., San Francisco.

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

Oregon Chapter:
Donald W. Edmundson, President; Walter L. Gordon, Vice-President; Earl P. Newberry, Secretary; Charles Gilman Davis, Treasurer. Directors: Donald J. Stewart. Office of Secy., 619 Builders Exchange Bldg., Portland.

Pasadena Chapter:
William H. Taylor, President; Lee B. Kline, Vice-President; H. Douglas Byles, Secretary; Lyman F. Ennis, Treasurer. Directors: Henry C. Burge, Keith P. Marston, Ernest C. Wilson and Harold B. Zook. Office of Secty., 622 S. Lake Ave., Pasadena.

San Diego Chapter:
Frank Hope, President; Sim Bruce Richards, Vice-President; Raymond Lee Eggers, Secretary; Fred Chilcott, Treasurer; Directors: Herbert Fifield, William Wilmurt, Sam W. Hamill, Donald Campbell and Victor Wulff. Office of Secy., 4730 Palm Ave., La Mesa, Calif.

San Joaquin Chapter:
Philip S. Buckingham (Fresno), President; Allen Y. Lew (Fresno), Vice-President; James J. Nargis (Fresno), Secretary); Paul C. Shattuck (Merced), Treasurer. Directors: William C. Hyberg, David H. Horn, Alastair Simpson. Office of Secty., 627 Rowell Bldg., Fresno 21.

Santa Barbara Chapter:
Glen G. Mosher, President; Lewis Storrs, Vice-President; Darwin Ed. Fisher, Secretary; Wallace W. Arendt, Treasurer. Directors: Robert I. Hoyt and Roy Wilson. Office of Secty., 20 S. Ash St., Ventura.

Southern California Chapter:
William Gleas Balch, President; S. Kenneth Johnson, Vice-President; Stewart Granger, Secretary; Stanley R. Gould, Treasurer. Directors: Cornelius M. Deasy, Herman Charles Light, George Vernon Russell, Ulysses Floyd Rible. Executive Secy., Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter:
Nelson J. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Stacey G. Bennett, 2nd Vice-President; Robert M. Jones, Secretary; Robert A. Parker, Treasurer. TRUSTEES—Lyle N. Swedberg and Robert B. Price. Office of Secy., 2907 A Street, Tacoma 2, Wash.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Lloyd J. Lovegren, President; James J. Chiarelli, 1st Vice-President; Harold W. Hall, 2nd Vice-President; John L. Rogers, Secretary Albert Bumgardner, Treasurer. J. Emil Anderson, Robert H. Dietz, Robert L. Durham, and Carl F. Gould Directors. Miss Dayis Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter.
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors: Kenneth Storment, Victor L. Wulff. Office of Secy., 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President; Harry W. Seckel, Vice-President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P.O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS:
John Lyon Reid, President (San Francisco); William G. Balch, Vice-President (Los Angeles); Lee B. Kline, Secretary (Pasadena); Albert B. Thomas, Treasurer (Sacramento); Miss Rhoda Monks, Office Secretary. Office of Secty., 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BD. ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles), Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Anbeles; San Francisco Office, Room 300, 507 Polk St.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Joseph W. Tasker, Secretary; Lawrence Franceschina, Treasurer. Club Quarters, 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
J. Morris Hales, Ceco Steel Products Corpn, President; H. C. Galitz, Westinghouse Electric Corpn, Elevator Division, Vice-President; Owen L. McComas, Arcadia Metal Products, Secretary; LeRoy Frandsen, Detroit Steel Products, Fenestra Building Panel Division, Treasurer.

Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institttue—Los Angeles:
D. Stewart Kerr, AIA, President; R. R. Coghlan, Jr., Vice-President; W. F. Norton, Secretary; Malcolm Lowe, Treasurer. E. Phil Filsinger, Liaison Officer, Producers' Council, Gladding, McBean & Company.

sociates—Charles V. Rueger, Jr., and Lorn Wallace, Tacoma.

OREGON STATE CHAPTER

"Architecture U.S.A." featured a recent meeting with members of the Women's Architectural League in attendance. The Chapter contemplates obtaining the film for showing to organizations and groups in the area.

SANTA BARBARA CHAPTER

Glen G. Mosher of Santa Barbara was elected president of the Santa Barbara Chapter, AIA, at the recent annual meeting. He succeeds Roy W. Cheesman.

Architect Lewis Storrs was named vice-president; Darwin Ed. Fisher, secretary; and Wallace W. Arendt, treasurer. Directors named to serve for the ensuing year included Wallace W. Arendt, Robert Ingle Hoyt, Lewis Storrs, and Roy Wilson.

Highlight of the meeting was a panel discussion on the subject "Trends in Santa Barbara Architecture," John F. Murphy representing regional architecture, and Wallace W. Arendt representing contemporary architecture.

PASADENA CHAPTER

"Wood Products" was the theme of the February meeting, with Frank Kroener, representative of "Glued Laminates" the principal speaker discussing a number of phases of the industry.

Lonnie Lira Correll and James V. Grizzell, Jr., were welcomed as new Associate Members.

WASHINGTON STATE CHAPTER

"The Architect and Finance" was the first of a series of "professional talks for professional people" to be given at the regular Chapter meetings.

New Members include: James E. Hussey, John C. Lindahl, Kenneth S. Ripley, and William C. Wherrette, Corporate Members; Harry E. Botesch, Seth M. Fulcher, Kenneth D. Garrison, and Kenneth E. Koehler, Associates.

CALIFORNIA COUNCIL OF ARCHITECTS

John Lyon Reid, San Francisco, was elected president of the California Council of Architects at their annual meeting in Monterey, succeeding architect Malcolm Reynolds of Oakland.

Other officers named to serve during 1956 included: William Glenn Balch of Los Angeles, vice-president; Lee B. Kline of Pasadena, secretary; Albert B. Thomas of Sacramento, treasurer, and Frank Treseder of Los Gatos, member at large.

WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

Structural Engineers Association of Northern California

Howard A. Schirmer, President; Walter L. Dickey, Vice-President; Harry B. Corlett, Secretary; Cecil H. Wells, Jr., Asst Secy.; William K. Cloud, Treasurer. Directors, William W. Brewer, Walter B. Dickey, Wesley T. Hayes, Jack Y. Long, Michael V. Pregnoff, Clarence E. Rinne, Howard A. Schirmer. Office of Secy., 411 Market St., San Francisco.

Structural Engineers Association of Central California

C. M Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers
Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"Engineering Problems of Nuclear Warfare" was the subject of a talk by Rear Admiral A. G. Cook, U.S.N. (Ret.), Director of the San Francisco Disaster Council and Corps; R. H. Owens, City Engineer, City and County of San Francisco; and Dr. Manfred Mueller, Chemistry Department, City College of San Francisco, at the February meeting held in the Engineers' Club, San Francisco.

Discussion included our civil defense organization on a federal, state and local level; the blast effect of nuclear weapons and the problems involved in providing adequate shelter from radiation. Motion pictures were shown to demonstrate many points of the subject.

NEW MEMBERS: Member, Douglas C. Moorhouse; Junior Member, Winifred Hutton and J. P. Kourkene; Affiliates, Milton A. Culver and Richard L. Erlin.

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IRON AND STEEL ENGINEERS MEET

The third annual West Coast meeting of the Association of Iron and Steel Engineers was held in the Hotel Statler, Los Angeles, the latter part of the month.

Technical sessions highlighted the first two days of the program with papers by leading steel mill men devoted to such subjects as continuous pickling, sintering and pelletizing, open hearth precipitators, induction heating and electrical maintenance.

The three-day convention concluded with an inspection of the Los Angeles Plant of the Bethlehem Pacific Coast Steel Corp.

AMERICAN SOCIETY OF CIVIL ENGINEERS —Los Angeles

"The Impact of Modern Freeways Upon the Community and the Individual" is the subject of the March general meeting to be held in the Rodger Young Auditorium, Los Angeles, in joint session with the Los Angeles Transportation groups, Wednesday, March 14.

Scheduled speakers include: Hugo H. Winter, Member, ASCE, Assistant Engineer, Design Bureau of Engineering, City of Los Angeles, and Dexter MacBride, Senior Right of Way Agent, California Division of Highways.

Freeways are being constructed with a tremendous

Barbara Counties Branch. Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

CDR. Paul E. Seufer, President; J. G. Wright, 1st Vice-President; COL. Wm. F. Cassidy, 2nd Vice-President; H. T. Anderson, Secretary; Thomas Hurley, Treasurer. Directors: COL. L. R. Ingram, LTCOL. C. S. Lindsey, E. H. Thouren, CDR. W. J. Valentine, P. Wm. Kohlhaas, BGEN. D. F. Johns, RADM. C. A. Trexel, COL. Paul D. Berrigan, and Larry L. Wise.

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yearly expenditure in the Los Angeles area, and the meeting is designed to inspect the impact on communities and individuals of freeways.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The February meeting was a joint venture with the Los Angeles Council of Engineering Societies sponsoring "Engineers' Week," being observed throughout the nation February 19-25.

Dan Kimball, president of Areo-Jet General Corp. and former Secretary of the Navy under President Truman, was the principal speaker, taking as his subject "The Engineers' Professional Relation to our National Welfare."

Many civic leaders and leaders in the scientific professions attended the meeting held in the Biltmore Hotel.

General chairman of the meeting was J. Calvin Brown, former ASME national president; N. A. D'Arcy, president of the Los Angeles Council of Engineering Societies, presided.

AMERICAN SOCIETY OF CIVIL ENGINEERS — San Francisco

Erection of the famed Texas Tower radar island was discussed at the February meeting with Gordon F. A. Fletcher, assistant vice-president of Raymond Concrete Pile Company and project manager, the principal speaker.

FEMINEERS

The Femineers, San Francisco, were treated to an interesting program at their February meeting in the Elks Club, San Francisco, when Naomi MacCabe Manwaring reviewed the book "Bare Feet in the Palace."

Elected to serve as officers for the ensuing year, at a recent meeting, were Mrs. John Fies, President; Mrs. Victor R. Sandner, Vice-President; Mrs. Howard A. Schirmer, Secretary; Mrs. Fred Nicholson, Treasurer. Named to serve on the Board of Directors were Mrs. John B. Harrington, Mrs. F. W. Kellberg, Mrs. Leslie W. Graham, Mrs. J. A. Paquette, and Mrs. E. Kenny McKesson.

SOCIETY OF AMERICAN MILITARY ENGINEERS — San Francisco Post

"Professionalism in Air Force Installations" was the subject of a talk by Major General Lee B. Wash-

IMPORTANT NOTICE!

As of December 1, the new

F. H. A. MPR Revision No. 55 requires:

"55-lb smooth surface roll roofing with edges lapped and sealed, or other materials providing equivalent durability and water vapor resistance under concrete slab on ground."

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is F. H. A. accepted in lieu of 55-lb. roll roofing.

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bourne, USAF, at the February meeting held in the Presidio Officers Club, Presidio of San Francisco.

General Washbourne, a graduate of the U.S. Military Academy in 1927, served as an engineer officer for 21 years, being assigned to the Air Force headquarers for duty as Director of Installations in 1952, and in 1954 was assigned to the newly designated Office of the Assistant Chief of Staff.

WALTER L. DICKEY ELECTED PRESIDENT STRUCTURAL ENGINEERS ASSOCIATION

Walter L. Dickey, Structural Engineer for the Power Division of the Bechtel Corporation, was recently elected president of the Structural Engineers Association of Northern California.

Dickey, a 1931 Civil Engineering graduate of the California Institute of Technology, spent two years as a construction worker, then began his engineering career in reconstruction after the Long Beach earthquake of 1933. He later returned for graduate study in structural design at Cal Tech. Dickey was in charge of design and construction of a processing plant in the jungles of British Honduras, and was associated with several Los Angeles architectural and engineering firms, specializing in earthquake and structural design of commercial and industrial buildings.

WALTER L. DICKEY
SEANC President

Following service in World War II as a Commander in the Navy Civil Engineers Corps, Dickey entered private practice and joined Bechtel in 1948.

Other officers named to serve with Dickey included Henry J. Degenkolb, partner in the San Francisco firm of John J. Gould and H. J. Degenkolb, Consulting Engineers, Vice-President; Samuel H. Clark, District Engineer, American Institute of Steel Construction, Secretary; Cecil H. Wells, Jr., associated with Hall, Pregnoff & Matheu, Structural Engineers, Assistant Secretary; William K. Cloud, Chief Seismological Field Survey, U.S. Coast and Geodetic Survey, Treasurer; directors Walter L. Dickey, Henry J. Degenkolb, Charles D. DeMaria, William W. Brewer, Clarence E. Rinne, Howard A. Schirmer, and James L. Stratta.

WOODWORK INSTITUTE ELECTS NEW OFFICERS

The Woodwork Institute of California elected Byron Taylor of the Taylor Millwork & Stair Company of Gardena President of the Institute for the ensuing year.

Other officers named to serve with Taylor included: J. L. Pierce, Pacific Manufacturing Company, Santa Clara, 1st vice-president; W. Perry Acuff, Western Lumber Company, San Diego, 2nd vice-president, and Rex Sporleder, Hollenbeck-Bush Planing Mill, Fresno, treasurer.

Members of the Board of Directors include E. F. Atkinson, Clinton Mill & Mfg. Company, Oakland; Stanley Gustafson, Sierra Mill & Building Materials Company, Sacramento; Robert Hogan, Hogan Lumber Company, Oakland; Jack Little, Union Planing Mill, Stockton; Harry Libby, John W. Koehl & Son, Inc., and Adolph Warvarosky, Los Angeles Millwork Company, Los Angeles; E. G. Ludwick, Santa Barbara Mill & Lumber Company, Santa Barbara; Philip McCoy, Western Pine Supply, Emeryville; C. E. Morrison, California Manufacturing Company, Sacramento; Tom Work, Jr., The Work Mill & Cabinet Co., Monterey; and Roy Young, Pacific Lumber Dealers Supply Co., Harbor City.

NEWS & COMMENT ON ART

(From page 6)

day at 3 p.m.; Educational activities include Painting Classes for Children aged 6-14 each Saturday morning; An introductory class for adults desiring instruction in contemporary approaches to painting will be held each Saturday afternoon at 2 o'clock. All classes are free.

The museum is open daily.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is highlighting the February exhibition of special shows with "The New Decade," an exhibition of twenty-two European Painters and Sculptors. The exhibit was organized by the Museum of Modern Art of New York City.

Other exhibits include the American Theatre and The Dance, an unusual display organized by the Contemporary Dance Foundation of San Francisco; and a number of special items from the Permanent Collection.

EVENTS: Lecture tours are conducted each Sunday afternoon at 3 o'clock; Wednesday evening discussions on art; and the Book Shop and Rental Gallery. Museum activities include Adventures in Drawing and Painting (Sketch Club and Picture Class); Art for the Layman, a course designed to awaken and develop inherent artistic potentialities of the layman; and the Children's Saturday Morning Art Classes, each Saturday morning from 10 to 11, ages 6-14.

The museum is open daily.

JOHNSON SERVICE COMPANY EXPANDS

The Johnson Service Company, one of the oldest and most progressive companies in the fast growing automatic temperature control field has announced an expansion program to be financed by the sale of a limited number of shares of common stock in the company.

Johnson Service through its excellent engineering and development department, in cooperation with other equipment manufacturers, is meeting the demand for new and improved automatic control devices in the air conditioning, heating and ventilating industries, particularly in the school, hospital, public buildings, stores, industrial plants, and office buildings.

The special offering of common stock is being made through the firm of Elworthy & Company, Investment Securities, 111 Sutter Street, San Francisco.

AARON WACHTER IS HONORED

Aaron Wachter, Shell Development Company, Emeryville, California, was awarded the 1955 Outstanding Service Award of Western Region, National Association of Corrosion Engineers, for his contribution in the field of administration and technical capacities.

HOME BUILDERS ELECT OFFICERS

The Home Builders Institute of Southern California recently installed R. Reese Myers as president for 1956, succeeding Walter W. Keusder.

At the annual installation dinner, held in the Beverly Hilton Hotel, other officers installed included: Charles W. Getchell, first vice president; George M. Pardee, Jr., second vice president; Milton Brock, Jr., secretary, and John D. Griffith, treasurer. George O. Prussell continued as executive vice president.

ARCHITECT AND ENGINEERING FIRM EXPANDS OFFICES

The architectural and engineering firm of W. P. Day, San Francisco, has moved into new quarters at 1201 Sacramento Street, San Francisco.

W. P. Day, member, Am. Soc. of Civil Engineers and AIA; H. M. Michelsen, AIA; and G. A. Sedgwick, assoc. member of Am. Soc. of Civil Engineers, structural engineer, comprise the members of the firm.

NEW COUNTY OFFICES

Architect J. Clarence Felciano, AIA, Santa Rosa, is completing drawings for construction of a new County Office building to be built in Santa Rosa for Sonoma County.

The building will be 1 story, reinforced concrete construction and will contain 42,000 sq. ft. of area. Estimated cost of the work is $700,000.

NAMED TO CAPITAL PLANNING BOARD

Pereira & Luckman, Los Angeles, architects and engineers, have been appointed members of a Planning Board to formulate plans for the construction in the District of Columbia of a civic auditorium, an Inaugural Hall of Presidents, a music and fine arts center, a mass communications center and correlated facilities.

The Board will report to a Federal commission, established by An Act of Congress, and members appointed by President Eisenhower, Vice-President Nixon, and Speaker Sam Rayburn.

Charles B. Bennett of Pereira & Luckman will serve as executive director of the planning board which will make an early report to the full commission of twenty-one members.

HAWS PURCHASES KRAMER VALVES

J. E. Traynor, president and general manager of the Haws Drinking Faucet Company, Berkeley, has announced the purchase of the Kramer Manufacturing Company of San Francisco, manufacturer of Kramer flush valves since 1925.

The firm will be operated as the Kramer Flush Valve Division of the Haws Drinking Faucet Company, and will remain at its present San Francisco location.

Traynor also announced the appointment of John S. Googins as manager of the newly acquired firm.

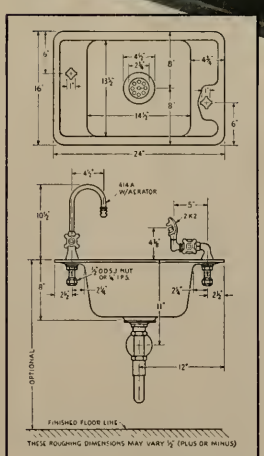
ARCHITECT FIRM ANNOUNCED

Victor N. Jones and Associates, architects and engineers of Seattle, Washington, have announced the formation of a new partnership to be known as Jones, Lovegren, Helms & Jones, with offices at 706 Republic Building, Seattle.

Members of the new organization include: Victor N. Jones, AIA; Lloyd J. Lovegren, AIA; Kenneth C. Helms, AIA; and Gayne L. Jones, AIA.

Haws leads with another

NEW deck-type fountain



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PERSONALITIES

ERNEST HIDEO HARA
Architect

Honolulu, Hawaii

In the South Pacific paradise, made popular in tradition and song, by the romantic atmosphere of Waikiki and luaus, Ernest Hideo Hara was born on November 15, 1909. Graduating from the Royal Grammar School in Honolulu in 1924, he entered the exclusive private school of Punahou, graduating in 1928, and from the University of Hawaii in 1931, Hara entered the University of Southern California graduating with the degree of Bachelor of Architecture in 1935.

ERNEST HIDEO HARA
Architect

His first practical experience was with Claude A. Stiehl, San Francisco area architect for six years, later associating himself with C. W. Dickey, one of the early deans of architecture in Hawaii. Following two years with the U.S. Engineers and receipt of his registration to practice in June 1941, Hara entered private practice in 1945.

Since conducting his own office he has contributed much to the architecture and construction of the Islands. Among some of the outstanding work is the Honolulu City Hall Addition, Kapaskea Park Pavilion; Kailua Secondary and Vocational Schools; the Lihue Elementary School; Konawaena High and Elementary School; the Nuuanu Congregational Church and the Waipahu Community Church. In addition his office has done many remodeling and addition jobs.

Hara has been a delegate to the California Council of Architects Convention on the Mainland and has attended two School Planning Conferences at Stanford University. He is active in the A.I.A. Honolulu Chapter; the Waioli Lions Club; Honolulu Chamber of Commerce, and the Japanese Chamber of Commerce. Hobby—is architecture.

ARCHITECTS GET CITY APPOINTMENTS

Three architects of San Francisco has been appointed by the city's new mayor, George Christopher, to serve on city commissions.

Donald Beach Kirby, Regional Director of the American Institute of Architects, has been named a member of the City Planning Commission.

Albert Roller, AIA, and Clarence O. Petersen, AIA, were appointed to the San Francisco Art Commission.

CONSTRUCTION IN 1956

(From page 10)

cipally as the result of an expected decline of more than 30 per cent in its industrial program, to about $500 million, due to completion of a large part of its current atomic energy facility program. On the other hand, military and naval construction are expected to continue increasing for the second year, reaching about $1.5 billion, a gain of 15 per cent. Conservation and development construction, which has been trending downward since 1950, is expected to increase by 13 per cent, to about $675 million.

State and Local—As the dominant part of public construction, state and local public works, consisting principally of highways, schools and other community

UNIFORM RESULTS

of tested processes

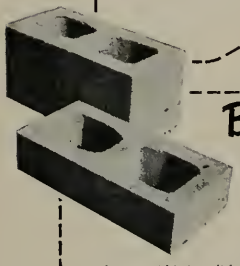

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PHOTO CREDITS: A. Allen Hawkins, Page 11; McKinley Studio, Page 32; Malone & Hooper, Architects, Pages 12, 13, 14, 15; Photo-Art Commercial Studio, Pages 16, 17, 18, 19, 21, 22; West Coast Lumbermen's Association, Page 20; Allen Hawkins, Page 23; Stiles and Robert Clements, Architect, Page 25.

facilities, are expected to total more than 70 per cent of public expenditures in 1956, approaching $10 billion.

Highway construction is expected to rise $500 million this year to a total of $4.6 billion, without consideration of any expanded program that might be approved by the Congress, which would show its effect later.

The mounting pressure for new classrooms to accommodate rapidly increasing school enrollments and replace obsolete facilities should push public educational construction some 12 per cent ahead of 1955 activity to about $2.8 billion, not taking into account any new federal aid legislation that may be enacted.

Sewerage and water facilities, based on bond issue approvals, are expected to continue rising at the rate of more than 10 per cent, to about $1.2 billion, still far below requirements of growing communities and a swelling population.

OREGON HILLSIDES

(From page 22)

the liberal use of wood paneling throughout the home. In fact, every wall not in glass or rock is either western red cedar or west coast hemlock. This is a large home and the rather substantial amount of wood paneling adds a charm and distinctive character that sets it apart as a home with individuality and personality.

Heating is a combination of radiant and warm air. All of the interior woodwork has been finished natural to retain the grain, coloring and texture of the cedar and hemlock.

Oregon hillside architecture has one distinctive feature—it is different. Architect Reynolds has exploited almost every good feature of contemporary design and has utilized every modern convenience from the home appliance and equipment industry to make of this home a thing of beauty and comfort.

NEW LUMBER GRADES

(From page 10)

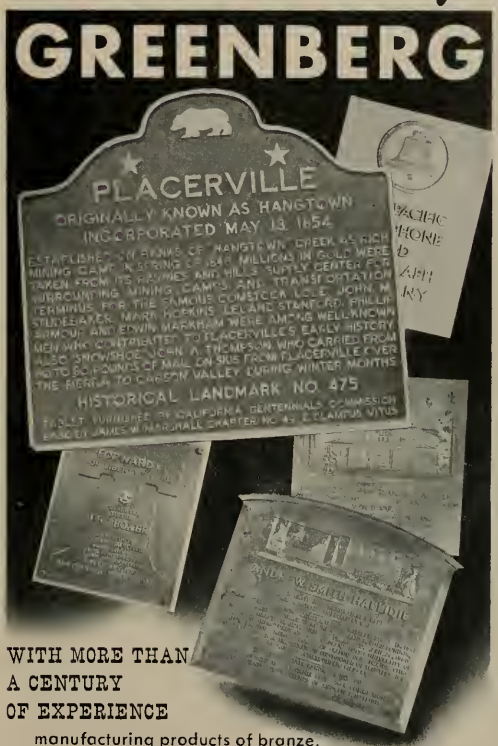
universal grade-stamping. The Southern Pine Association and the West Coast Lumbermen's Association have gone similarly on record. But every effort to substantially extend the grade-stamping of lumber has failed because the public would not accept #2 or #3 or #4.

Today the tide of demand is stronger than it has ever been before. And this time—with names instead of numbers to sell—every responsible lumber merchandiser has a chance to make it work.

The change to names applies only to the #1, #2, #3 and #4 grades of boards and 2" and thicker dimension, planks and timbers. SELECT MERCHANTABLE remains top grade in boards, and SELECT STRUCTURAL the top grade in dimension.

The lettering system—"B&Btr.," "C" and "D"—

FAMOUS LANDMARKS throughout THE WEST are cast in bronze by



WITH MORE THAN A CENTURY OF EXPERIENCE manufacturing products of bronze, it is difficult to look around anywhere in the West without seeing a Greenberg product. Bronze products of every description are being manufactured from fire hydrants and fire protection hose goods to bronze valves, fittings, plumbing specialties, drains, hardware, plaques, tablets and letters. If you do not have a Greenberg Catalog in your file, write for your copy today.

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remains in effect on finish, flooring, casing and other clear items. The only change is that "C&Btr." becomes the top grade of flat grain clears.

The name of the Bureau has been changed to West Coast Lumber Inspection Bureau.

The format of Rule #15 has been changed to make it more readable and more understandable. Key paragraphs are easier to find and easier to remember.

The fiber stress value of the present 1450f grade (#1) has been increased to 1500f, and the fiber stress value of the 1100f grade (#2) has been increased to 1200f.

The old rules permitted a full-length skip in #2 dimension—which caused more difficulty than any other single provision in the rules. FHA regarded a full-length skip an intentional scant sawing.

Rule #15 provides that STANDARD (the old #2) may have hit-and-miss skips on the edge, but may not be skipped full length.

STANDARD Joists and Planks grade (2x6 and wider) becomes a little better all around.

The thickness of boards and finish items has been reduced from 25/32" to ¾". Fifty percent of such material is ¾" at the present time. Those who wish to buy 25/32" boards may still buy them, of course, and have them grade-stamped.

Rule #15 will have a standard provision on material 6" in width—5½" instead of 5⅝" as at present. This applies already in the larger sizes—7½", 9½", 11½".

There are numerous other changes of lesser importance, but little or nothing to make the lumber you specify and receive under Rule #15 much different in appearance than the lumber you have been specifying and receiving under the old rules.

In some cases knot sizes have been tightened, in other cases the restrictions on wane or splits or white speck have been somewhat eased.

It will, we hope, usher in four words which will long be useful to the retail lumber dealer — CONSTRUCTION, STANDARD, UTILITY and ECONOMY.

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SCOPE OF MILLWORK

(From page 8)

13. WOOD PRESERVATIVES

All dipped or brushed wood preservative on millwork products when specified.

TYPICAL INCLUSIONS: Toxic, water-repellent, penetrating solutions, or leading in or painting of joints, and paint priming when such work must be done during fabrication of the product.

EXCLUDED: any priming, painting, oiling, white lead jointing, caulking, or creosoting except as set forth above.

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MAGAZINE
68 Post Street San Francisco

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

EUROPEAN ARCHITECTURE—In The Twentieth Century, 1924-1933. Vol. II, By Arnold Whittick. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $10.00.

The book is designed to cover the first half of the twentieth century, and is divided into five parts to present three volumes. The first consists of the first and second parts and takes the narrative to the year 1924. The second contains the third part and covers the period from 1924 to 1933, while the third volume will contain the fourth and fifth parts from 1933 to 1940, and from 1945 to 1950.

The author introduces his subjects by dealing broadly with the main European developments since the late eighteenth century, allowing the treatment to become more detailed as the year 1914 is approached. From that date onwards every movement and tendency of aesthetic, social and technical significance is discussed, and the most important buildings illustrating these tendencies are described. Many illustrations and plans are included.

ARCHITECTS' DETAIL SHEETS. Edited by Edward D. Mills, F.R.I.B.A. Philosophical Library, Inc., 15 E. 40th Street, New York 16. Price $12.00.

A new selection of 96 sheets is given in this volume, consisting of specially prepared scale drawings and photographs intended to show how present day architects have combined good construction and satisfactory appearance in buildings and structures of various kinds. Details have been drawn from many countries, and the work of nearly 70 designers is represented.

The examples are arranged in appropriate groupings for ease of comparison and ready reference, and a comprehensive English-French-German-Spanish glossary of the technical terms used has been included.

THE FABRICATOR'S HANDBOOK—How to Fabricate Rezistal Stainless Steels. Crucible Steel Company of America, Pittsburgh 30, Pa. (Available on letterhead request).

Content has been divided into seven main groups ranging from Forming, Machining, Cutting, Joining, Heat treating-Pickling, Finishing, and Reference Data. Prepared to answer some of the problems which may confront the fabricators of stainless steels. Numerous drawings, illustrations, charts and tables.

TRENDS IN SCHOOL PLANNING — School Planning Laboratory, School of Education, Stanford University. By James E. MacConnell, Director and Jon S. Peters, Editor, Stanford University Press, Stanford, California. Price $4.00.

The Fifth Annual School Planning Conference furnishes the backdrop and materials for this publication.

Detailed presentations by resource people and experts in various phases of school planning are skilfully integrated into a readable and valuable publication. Case studies add considerably to the interest of the book which will be valuable for those planning any educational facilities.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Sliding glass doors. New catalog (AIA File 37-B-2) features aluminum and steel, as well as ¼ size architectural tracing details, frame and glass sizes and specifications. Free copy, write DEPT-A&E, Frank B. Miller Mfg. Co., Inc., 3216 Valhalla Drive, Burbank, California.

"Hinges for Modern Buildings." New 8-page catalog (A.I.A. File 27B) describes and illustrates a representative variety of hinges for churches, schools, hospitals, libraries and commercial buildings produced by McKinney Mfg. Co.; reviews such features as construction and the use of oil bearings, an exclusive two-piece roller pin, an adjustable door control

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hinge, and hinges made to template specifications. Forged iron door hardware for institutions and other public buildings is also covered in the new literature. Free copy, write DEPT-A&E, McKinney Mfg. Co., 1715 Liverpool St., Pittsburgh 33, Pa.

Continuous strip maple floors. Four color brochure describes features of Ironbound continuous strip maple floors, and installations; architects, building contractors, building supervisors and others interested in hardwood flooring for school classrooms and gymnasiums, bakeries, laboratories, auditoriums, public buildings, warehouses, churches, and industrial buildings—including special tongue and groove sections imbedded in mastic with sections interlocked by sawtoothed steel splines. Write for free copy, DEPT-A&E, Robbins Flooring Co., Reed City, Mich.

"Firm Specifications and their Effect on Building Costs." A carefully documented study, presented by Kenneth M. Wilson, Chief Electrical and Mechanical Engineering Division of E. F. Klingler and Associates, Eau Claire, Wisconsin, at the second annual Heating and Air Conditioning conference in Salt Lake City, Utah. Report has deep implications in the new construction field, and is considered by many as "must" reading at the professional level. Reprint available, write DEPT-A&E, Fred H. Schaub Engineering Co., 2110 S. Marshall Blvd., Chicago 23, Ill.

New restaurant interiors. Famous Names and Places, an extensive brochure of new restaurant interiors; many of the installations are award winners in the National Food Service Contest and offer numerous ideas in modern restaurant and dining room design. Included are a number of the new "open" design restaurants—interiors that can be seen and are designed to attract customers from the street or highway. Write for free copy, DEPT-A&E, The Chicago Hardware Foundry Co., North Chicago, Ill.

New 1956 Directory of American Council of Independent Laboratories. In addition to scope sheets for 67 member laboratories providing details of facilities and services, the directory includes an extensive Index of Services and Facilities listing over 400 categories of services; geographical listing of members and services for quick reference and use. Copy available, write DEPT-A&E, American Council of Independent Laboratories, Inc., 4302 East-West Highway, Washington 14, D.C.

Concrete Masonry Design Manual. New Manual available to concrete masonry construction designers; valuable reference for architects and engineers who design concrete masonry structures; divided into nine sections; well illustrated with detail drawings to scale; pages removable for tracing. Write DEPT-A&E, Concrete Masonry Assn., 3250 W. 6th St., Los Angeles 5.

Precast roofs for service stations. Low-cost concrete roofs that go up fast and save time and money for service station builders; simple system of factory-made slabs, many typical installations illustrated; roof slab layouts included. Produced by 21 manufacturers in the U.S. and Canada. For information write DEPT-A&E, The Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.

School glazing specifications. A new work sheet (A.I.A. File 26-A) which simplifies writing glazing specifications for school buildings; designed to fit into and become part of a school project job file (8½ by 11 in.), 6 pages; also suggested specifications for patterned glass products frequently used in school buildings—cut-away drawing of a typical school building showing use of various glass products throughout the building with space provided for filling in glass specifications for each area. Write DEPT-A&E, Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.

Commercial refrigeration. New catalog directory, 104 pages, specifically compiled for the architect; includes plan and elevation views of each refrigeration model, showing electrical connections and drain lines; lists complete specifications for each individual model; exterior and interior views of each refrigerator; describes refrigeration ranging in capacities from 15 cu. ft. to 90 cu. ft. Sections cover reach-in, tray-file, and dual-temperature refrigerators as well as freezers, display cases and bottle beverage coolers, indexed for easy reference. Copies available, write DEPT-A&E, Glenco Refrigeration Corp., Janney & Ann Sts., Philadelphia 34, Pa.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb 5.05
Asphalt roofing, 15-lbs 2.70
Asphalt roofing, 30-lbs 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 35 per 100 ft.
Sash weights, cast iron, $100.00 to...
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull brass plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 per bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White ..... 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	....	.64

Aggregates—Haydite or Basalite
¼-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅝-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. ..... $1..75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	25/32x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Qtd., White	$425	$405		
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
25/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

25/32 x 2¼ First Grade	$390 00
25/32 x 2¼ 2nd Grade	365.00
25/32 x 2¼ 2nd & Btr. Grade	375.00
25/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass ..... $ .30 per □ ft.
Double Strength Window Glass ..... .45 per □ ft.
Plate Glass, ¼ polished to 75 ..... 1.60 per □ ft.
75 to 100 ..... 1.74 per □ ft.
¼ in. Polished Wire Plate Glass ..... 2.50 per □ ft.
¼ in. Rgh. Wire Glass ..... .80 per □ ft.
⅛ in. Obscure Glass ..... .44 per □ ft.
3/32 in. Obscure Glass ..... .63 per □ ft.
⅛ in. Heat Absorbing Obscure ..... .54 per □ ft.
3/32 in. Heat Aborbing Wire ..... .72 per □ ft.
⅛ in. Ribbed ..... .44 per □ ft.
3/32 in. Ribbed ..... .63 per □ ft.
⅛ in. Rough ..... .44 per □ ft.
3/32 in. Rough ..... .63 per □ ft.
Glazing of above additional $.15 to .30 per □ ft.
Glass Blocks, set in place ..... 3.50 per □ ft.

HEATING—

Furnaces—Gas Fired
Floor Furnace, 25,000 BTU ..... $ 70.50
35,000 BTU 77.00
45,000 BTU 90.50
Automatic Control, Add 39.00
Dual Wall Furnaces, 25,000 BTU 91.50
35,000 BTU 99.00
45,000 BTU 117.00
With Automatic Control, Add 39.00
Unit Heaters, 50,000 BTU 202.00
Gravity Furnace, 65,000 BTU 198.00
Forced Air Furnace, 75,000 BTU 313.50
Water Heaters—5-year guarantee
With Thermostat Control,
20 gal. capacity 87.50
30 gal. capacity 103.95
40 gal. capacity 120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whitewashing	per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead In Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50	lineal foot
8-inch	3.00	lineal foot
10-inch	4.00	lineal foot
12-inch	5.00	lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless.
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16"..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored 12 x 12, each	$ .17

Krattile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red	$ .28	$ .253
12 x 12 x 7/8-inch, plain	.295	.265
6 x 12 x 7/8-inch, plain	.32	.287

Building Tile—	
8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—	
12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

XPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and ldresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or presentative, may be found.

HESIVES (1)
ll and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

R CONDITIONING (2)
r Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles SB: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

CHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

CHITECTURAL VENEER (3)
ramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
rcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
anite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
arble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

NKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

THROOM FIXTURES (5)
etal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1 2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw Icadm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw Icadm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%prom	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB 12½cv; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw Ica			10cw	10cw	10cw
ROOFER	7½cw 7½cv	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw Ica	8½cw	10cv		8½cw 10cv	7½cw 10cv
SHEET METAL WORKER	7½cw	7½cw 3¼cv	7½cw 3¼cv	7½cw 2%v	7½cw	7½cw	7½cw 7½cv	7½cw 4%v	8½cw 6½cv	8½cw 6½cv	8½cw	8½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP 12½cv; 2½cJIB	10cw Ica	10cw Ica	10cw 10cP; Ica	10cw Ica	10cw 10cP; Ica	10cw	10cw Ica			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw 2½%w ¼%prom				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

FOOD PROCESSING & WAREHOUSE, Los Angeles, Arizona Pico's Packing Co., Los Angeles, owner. One-story frame and stucco, composition roofing, skylights, aluminum overhead doors, concrete slab floor, interior stucco, plumbing and electrical work; 50 x 100 ft. of area. ENGINEER: Edward F. Escalle, Los Angeles. GENERAL CONTRACTOR: H. G. Larsen, South Gate.

SHOPPING CENTER, Garden Grove, Orange County. Two retail store buildings as part of shopping center to be known as "Garden Square"; tilt-up concrete construction, masonry work, composition roofing, concrete and asphalt tile floors, forced air heating, plate glass fronts, interior plaster, toilets, asphalt paving; 7500 sq. ft. and 16,000 sq. ft. of floor space. ENGINEERS: Chas. P. Morgan & Associates, Long Beach. GENERAL CONTRACTOR: J. Ray Construction Co., Whittier.

TEMPORARY CHURCH, Concord, Contra Costa County. Roman Catholic Archbishop of San Francisco, owner. Frame and stucco construction, concrete floor—$47,171. ARCHITECT: Wilton Smith, San Francisco. GENERAL CONTRACTOR: Elmer J. Freethy, El Cerrito.

GYMNASIUM, School for Deaf, Berkeley, Alameda County. State of California, Sacramento, owner. Construction includes complete gymnasium facilities—$311,311. ARCHITECT: Architectural Division, State of California, Sacramento. GENERAL CONTRACTOR: S. J. Amoroso Const. Co., San Francisco.

HIGH SCHOOL, Bishop Armstrong, Sacramento. Roman Catholic Diocese of Sacramento, owner. One and two-story reinforced concrete construction; 28 classrooms, 4 science rooms, home making, library, speech and arts, boys and girls gymnasium, cafeteria, Rectory; complete educational facilities for 1000 students—$1,500,000. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Continental Const. Co., Sacramento.

BOWLING CENTER, Mt. View, Santa Clara County. Henry Golobic, San Francisco, owner. 1 story, reinforced concrete tilt-up construction; automatic sprinklers, acoustical tile, terrazzo, resilient floors, air conditioning, restaurant, cocktail lounge; 26,000 sq. ft. area — $200,000. ARCHITECT: Gordon F. Powers, Daly & DeRosa, Long Beach. GENERAL CONTRACTOR: Conrad Gresham, Santa Clara.

MEDICAL BLDG., Palo Alto, Santa Clara County. Dr. Aarons, owner. 1 story frame and stucco, stone veneer and frame construction — $66,850. ARCHITECT: Irving Dickstein, Sunnyvale. GENERAL CONTRACTOR: Hub-Pacific Const. Co., Menlo Park.

AIRMEN'S DORMITORY, McClellan Air Force Base, Sacramento County. Corps of Engineers, U.S. Army, Sacramento, owner. 3 story dormitory, 42 x 204 ft., reinforced concrete, frame, masonry block walls; Shop building, 35 x 80 ft., concrete, frame, concrete block; Training Building, 48 x 238 ft., concrete block, paving, sidewalks, curbs, gutters, utilities — $1,173,887. GENERAL CONTRACTOR: Stolte Inc., Oakland.

OFFICE BLDG., San Rafael, Marin County. Guide Dogs for the Blind, San Rafael, owner. 1 story frame and stucco construction; 2700 sq. ft. floor area — $30,940. ENGINEER: Jas. H. McFarland, San Francisco. GENERAL CONTRACTOR: Jos. R. Filippo, San Rafael.

MILK RELAY STATION, San Mateo. Carnation Company, Los Angeles, owner. Office building, 32 x 55 ft., concrete block; Shop Bldg., pre-fab, metal sash, composition roofing, concrete floors — $70,000. GENERAL CONTRACTOR: Morris Daley, Burlingame.

COURTHOUSE ANNEX, Willows, Glenn County. County of Glenn, Willows, owner. 1 story brick and frame, composition roofing, concrete and asphalt tile floors — $86,457. ARCHITECT: Albert W. Kahl, San Mateo. GENERAL CONTRACTOR: Jake Funk, Orland.

BANK BLDG., Delano, Kern County. First Western Bank & Trust Co., San Francisco, owner. 1 story and part 2 story, concrete and ceramic veneer construction; aluminum sash, insulation, air conditioning system; 9,500 sq. ft. floor area—$175,287. ARCHITECT: Robert N. Eddy, Bakersfield. GENERAL CONTRACTOR: David Biggar, Bakersfield.

PRE-FAB STEEL GRANDSTAND, Fairgrounds, Madera. 21st Agricultural District Association, Madera, owner. Prefabricated steel grandstand to be erected at the 21st District Agricultural Fairgrounds near Madera—$34,846. GENERAL CONTRACTOR: L. B. Pipes Company, Fresno.

AUTO SALES, SERVICE & OFFICE BLDG., Stockton, San Joaquin County. Chase Chevrolet Co., Stockton, owner. 1 story and mezzanine, 100 x 100 ft., reinforced concrete and porcelain enamel, plate glass front, acoustical ceilings, asphalt tile floors, air conditioning. Also 1 story reinforced concrete and brick construction — $150,000. ARCHITECT: Robert R. Jones, Carmel. GENERAL CONTRACTOR: Shepherd & Green, Stockton.

FACTORY & WAREHOUSE, Modesto, Stanislaus County. Marathon Corp., Modesto, owner. 1 story reinforced concrete tilt-up construction; wood roofing; 100,000 sq. ft. area—$311,710. STRUCTURAL ENGINEER: Simpson & Stratta, San Francisco. GENERAL CONTRACTOR: Associated Constn. Co., San Francisco.

BANK BLDG., Fairfield, Solano County. First Western Bank & Trust Co., San Francisco, owner. 1 story and part 2 story reinforced concrete block with some structural steel construction; wood roof, 60 x 80 ft.—$155,744. ARCHITECT: Lillis & Smith, Vallejo. GENERAL CONTRACTOR: Ernest F. Schrock, Vacaville.

ALTER SHERIFF'S OFFICE, San Rafael, Marin County. County of Marin, San Rafael, owner. Remodel interior of offices and additions to kitchen—$25,589. ARCHITECT: Schubart & Friedman, San Francisco. GENERAL CONTRACTOR: Don Presco, San Rafael.

PROFESSIONAL BLDG., Fresno. Melvin Mar, Fresno, owner. Frame with some masonry construction—$80,300. ARCHITECT: Robert W. Stevens, AIA, Fresno. GENERAL CONTRACTOR: R. G. Fisher, Fresno.

STORE & OFFICE, Menlo Park, San Mateo County. Mr. Forsythe, Menlo Park, owner. 2 story reinforced concrete and frame, aluminum sash, plate glass front, some concrete block walls; 10,000 sq. ft. of area—$114,179. ARCHITECT: Peter Kump, AIA, Menlo Park. GENERAL CONTRACTOR: Stevenson-Pacific Co., Redwood City.

REST HOME, Menlo Park, San Mateo County. James O. Aced, Atherton, owner. 1 story, part 2 story, frame and stucco, board and batten exterior, concrete floors, radiant heating — $55,500. MECHANICAL ENGINEER: Wilfred W. Davies, San Carlos. CIVIL ENGINEER: Robert L. Smart, San Carlos.

SENIOR HIGH SCHOOL, Lakewood, Los Angeles County. Long Beach Board of Education, Long Beach, owner. Included are classrooms buildings, auditorium, gymnasium, shop building, cafeteria, library and administration buildings; reinforced concrete construction, structural steel work, built-up roofing, slab and asphalt tile floors, acoustical work, plastering, metal doors, metal sash, metal toilet partitions, gunite work, ornamental metal, wood flooring, school equipment installation, insulation, fire sprinklers, heating and ventilating — $3,808,440. ARCHITECT: Hugh Gibbs, AIA, Long Beach. GENERAL CONTRACTOR: Gust K. Newberg, Long Beach.

BANK BLDG., Delano, Kern County. Bank of America, San Francisco, owner. 1 story and mezzanine, reinforced concrete construction — $93,170. ARCHITECT: Continental Service Co., San Francisco. GENERAL CONTRACTOR: Tobish & Colombo, Bakersfield.

STORE BLDG., Costa Mesa, Orange County. Harvey Sommers and H. B. Law-

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son, Newport Beach, owners. 1 story reinforced masonry construction; composition roofing, concrete floor, painting, plastering, plumbing, electrical work, glass and metal front; 9800 sq. ft. floor area. ARCHITECT: Albert C. Martin & Associates, Architects and Engineers, Los Angeles. GENERAL CONTRACTOR: Galaxy Constn. Co., Costa Mesa.

FIRE HOUSE ADD'N, Arden, Sacramento County. Arden Fire Protection District, Sacramento, owner. 1 story addition to existing building—$44,498. ARCHITECT: Gordon Stafford, AIA, Sacramento. GENERAL CONTRACTOR: Arthur Odman, Fair Oaks.

BOWLING ALLEY, Redondo Beach, Los Angeles County. South Bay Bowling Corp., Beverly Hills, owner. Reinforced brick construction; 54 lanes, tapered steel girders, composition roofing, steel trusses, concrete slab, asphalt tile, ceramic tile and terrazzo floors, plate glass, plumbing, electrical, sheet metal, asphalt paving; 55,000 sq. ft. floor area: Facilities for bowling alleys, snack bar, cocktail bar and billiard room. ARCHITECT: Victor Gruen, West Los Angeles. GENERAL CONTRACTOR: McDonald Bros., Los Angeles.

MAINTENANCE HANGAR, etc., McClellan Air Force Base, Sacramento County. Corps of Engineers, U.S. Army, Sacramento, owner. Work includes Maintenance Hangar 250 x 370 ft., structural steel, 120 ft. span cantilever arches, corrugated metal siding; 1st and 2nd floors shop with elevator, steel and stud and plaster; Fire Station, reinforced concrete and concrete block, 3 stalls; 45 ft hose drying tower and observation center; 500,000 gallon, welded steel tank, pump house, service lines; paving, utilities—$2,438,154. GENERAL CONTRACTOR: Robert E. McKee Co., Glendale.

POINT SAN QUENTIN GUN CLUB, Marin Rod & Gun Club, San Rafael, owner. 1 story frame and stucco construction — $29,749. ARCHITECT: Gromme, Mulvin & Priestly, San Rafael. GENERAL CONTRACTOR: J. D. O'Connor Constn. Co., San Rafael.

SCHOOL ADDN., Rio San Gabriel Elementary School, Downey, Los Angeles County. Downey City School District, Downey, owner. Addition of 4 classrooms, frame, plaster and brick veneer construction, wood roof, composition roofing, concrete slab and asphalt tile floors, radiant heating, steel sash, acoustic tile ceilings, toilets, electrical, chalk and tack boards; 5000 sq. ft. area — $64,810. ARCHITECT: Clifford K. Denman and Harry T. MacDonald, Associated, Los Angeles. GENERAL CONTRACTOR: Hoffman-Campbell Co., Pasadena.

CAFETERIA, Fresno State College, Fresno. State of California, Sacramento, owner. 1 story wood and frame, plaster walls, steel sash, concrete floor slab, composition roofing, electrical, hot water heating and air conditioning, refrigeration, plumbing — $278,868. ARCHITECT: Division of Architecture, State of California, Sacramento. GENERAL CONTRACTOR: L. B. Pipes Co., Fresno.

HOSPITAL ADD'N, St. Francis Hospital, San Francisco. St. Francis Hospital, San Francisco, owner. 3 story and basement, reinforced concrete construction; enameled steel exterior, metal sash, metal stub partitions, terrazzo and vinyl tile floors, 2 elevators, 80 x 110 ft.; provision made for later addition of 5 more floors — $650,000. ARCHITECT: Frank W. Trabucco and Lewis Hurlburt, San Francisco. GENERAL CONTRACTOR: Barrett Constn. Co., San Francisco.

TRAILER CAMP, Santa Monica, Los Angeles County. Irv's De Luxe Trailer Camp, Santa Monica, owner. Work includes new covered porch, roofing, electrical, stone and concrete work, louver windows. ARCHITECT: Kliegman & Leizer, Los Angeles. GENERAL CONTRACTOR: H. L. Statig, Malibu.

MEDICAL BLDG., San Francisco. Dr. Herbert J. Stuart, San Francisco, owner. 2 story frame and stucco construction; facilities for six suites of offices—$70,000. ARCHITECT: Bruce E. Heiser, AIA, San Francisco. GENERAL CONTRACTOR: John A. Nelson, San Francisco.

HOTEL REMODEL, Plaza, San Francisco. Allied Properties, San Francisco, owner. Interior remodel of lobby, dining room and kitchen. ARCHITECT: Leonard S. Mosias, AIA, San Francisco. GENERAL CONTRACTOR: Jacks & Irvine, San Francisco.

BANK BLDG, Willows, Glenn county. Bank of America, San Francisco, owner. 1-Story with mezzanine, reinforced concrete block building—$103,197. ARCHITECT: Continental Service Co., San Francisco. GENERAL CONTRACTOR: Brickson Const'n Co, North Sacramento.

NEW ELEMENTARY SCHOOL, Babbit, Mineral county, Nevada. Hawthorn Elementary School District, Hawthorne, owner. Work comprises facilities for 7-classrooms, toilet rooms — $146,460. ARCHITECT: Russell Mills, AIA, Reno. GENERAL CONTRACTOR: Davis Contracting Co, Fallon, Nevada.

INDUSTRIAL ARTS BLDG., High School, Madera. Madera Union High School District, Madera, owner. Work includes all facilities for new building—$177,700. ARCHITECT: Swartz & Hyberg, Fresno. GENERAL CONTRACTOR: R. G. Fisher, Fresno.

FACTORY & OFFICE, Costa Mesa, Orange county. Vernon L. Sorensen, Costa Mesa, owner. Tilt-up concrete construction, concrete slab floor, steel sash, 2-overhead wood doors, 80-ft bowstring trusses, wood sheathing and rafter roof, stubbed-in gas outlets, dry-wall partitions and asphalt tile in offices, 80x100 ft.; blacktop paving—$25,000. STRUCTURAL ENGINEER: Leslie L. Penn, Newport Beach. GENERAL CONTRACTOR: Ed Zilm Construction Co., Costa Mesa.

DEPARTMENT STORE, Alhambra, Los Angeles County. Nash Department Store, Alhambra, owner. 2-Story brick, 105-ft. bowstring trusses, composition roof, pine floors, carpeting, rubber and asphalt tile; lath and plaster interior, architectural projected sash, plate glass, wood-asphalt tile stairway, air conditioning, acoustical tile, structural steel beams and column interior supports, fluorescent lighting, elevator; 3000 sq. ft. office area on mezzanine; 105x170 ft. in area; blacktop paving — 275,000. STRUCTURAL ENGINEER: Leslie L. Penn, Newport Beach. GENERAL CONTRACTOR: Gopher Constn Co., East Los Angeles.

COMMERCIAL BLDG, San Francisco. Kaemter-Barrett & Smoot, San Francisco, owner. 1-Story, reinforced concrete commercial building — $65,000. ENGINEER: George H. Jennings, Berkeley. GENERAL CONTRACTOR: Associated Construction and Engineering Company, San Francisco.

PARACHUTE BLDG. Travis Air Force Base, Solano county. Corps Engineers, U.S. Army, Sacramento, owner. Concrete block masonry Parachute Building and Dinghy Shop, concrete foundations, parking areas, access roads, walks, curbs, gutters, utilities — $229,789. GENERAL CONTRACTOR: Rothschild, Raffin, & Weirick Construction Co, San Francisco.

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IN THE NEWS

CONSULTING ENGINEER THOMAS B. HUNTER

Thomas Benton Hunter, Jr., 75, prominent Bay Area consulting engineer, died December 26, 1955, following a long and distinguished career as an engineer. Graduating from Stanford University, Class of 1904, he became resident manager for the Pacific Improvement Company and superintendent of the Public Works Department for the City and County of Monterey.

Hunter served as Chief Engineer for the San Diego Exposition in 1912-13, Chief Engineer for the Palos Verdes Syndicate, and in 1914 established his practice in San Francisco. Many important jobs, noted for their architectural beauty and the quality of their mechanical layout, are a tribute to his effort. He is survived by two sons, Thomas B. Hunter, III, mechanical engineer, and Hale V. Hunter.

Hunter was one of the oldest and most consistent supporters of ARCHITECT & ENGINEER magazine, using advertising space each month for many years.

CHURCH AND SUNDAY SCHOOL

Architect Donald F. Haines, Stockton, is preparing plans for construction of a frame Church and Sunday School building for the Lutheran Church of Webberstown (Stockton).

ARCHITECTS ARE IN NEW OFFICE

The architectural firm of Campbell & Wong have moved into new and larger offices and are now located at 737 Beach Street, San Francisco. The firm is comprised of Worley K. Wong, AIA and John Carden Campbell.

M. S. UMBENHAUER APPOINTED MANAGER

M. S. Umbenhauer has been appointed manager of power plant design for the Fluor Corporation, Ltd., according to an announcement by J. S. Fluor, firm president, Los Angeles.

Umbenhauer will direct the company's technical services to the electric power industry.

OPENS WEST COAST OFFICE

Lightolier, Inc., lighting fixture and lamp manufacturer of Jersey City, N.J., has opened West Coast sales and display offices in Los Angeles, according to a recent announcement by Edward H. R. Blitzer, managing vice president of the firm.

Other sales offices are maintained in New York and Chicago.

NEW MOTEL AND SWIMMING POOL

Stanley W. Mattson, draftsman of Mt. View, is completing plans for construction of a 50-unit motel and swimming pool to be built near the City of Mt. View.

The building will be 2-story and of frame and stucco construction.

CONSTRUCTION FIRM IN NEW LOCATION

Excel Construction Company, general contractors, are occupying new headquarters at 8600 W. Venice Blvd., Los Angeles, according to a recent announcement by S. L. Pack and Frederick Katz, executives of the firm.

NEWLY DESIGNED WALLBOARD HAMMER

Design and engineering to give the best in positive nailing are features of this field-tested convex face wallboard hammer with knurled serrations and rounded edges.

These new features make possible the perfect dimple required for top quality wallboard installations and finishing; new head prevents the usual sharp breaks and unsightly hammer marks difficult to cover up. Is forged of tough Chrome-Molly steel, properly balanced on a 14" hickory handle with plenty of knuckle clearance; includes handy nail puller and sharp, wedge-shaped blade for shifting or prying wallboard panels. Manufactured to meet requirements in the gypsum wallboard, acoustical tile, fiber-board, and other drywall fields. Complete information from Wallboard Tool & Equipment Co., 1708 Seabright Ave., Long Beach 13, California.

PENNEY STORE FOR BERKELEY

Architect Robert B. Liles, AIA, of San Francisco, has completed drawings for construction of a 2-story (with basement) department store to be built in Berkeley for the J. C. Penney Company.

Construction will include a structural

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steel frame and steel bars with reinforced concrete; escalators and elevators. The building will be 85 x 235 ft.

ARCHITECT OPENS STOCKTON OFFICE

Dana D. Corrough, AIA, Architect, has opened offices at 2015 Pacific Avenue, Stockton, California, for the general practice of architecture.

THOMAS J. BARNETT IS MADE ASSISTANT MANAGER

Thomas J. Barnett, Los Angeles, has been appointed Assistant Manager of the Western Division of The National Plastic Products Company, according to an announcement by Kingsley L. Tate, Western Division manager of the firm.

The Western Division serves the eleven western states, Hawaiian Islands, Alaska, and the Orient.

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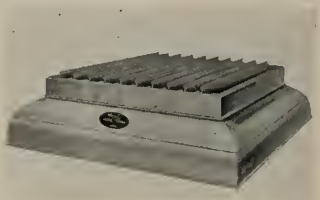
NEW ALUMALUNG ROOF EXHAUSTER

Most recent development in the field of Roof Exhausters is model announced by the Iron Lung Ventilator Company at the recent Nuclear Engineering & Science Congress in Cleveland.



Completely functional, it is built entirely of heavy wall, extruded aluminum sections with all joints welded. Being of aluminum it is lightweight and can easily be installed by two men without need of special equipment. Requires no painting as it is impervious to rust and corrosion inside and out. Overall height is 21 inches, available in sizes 20" to 60", and in capacities from 3800 CFM to 42,000 CFM. Complete data from Iron Lung Ventilator Co., 5403 Prospect Ave., Cleveland 3, Ohio.

ARCHITECT SELECTED

The architectural firm of Higgins & Root, AIA, San Jose, has been commissioned by the San Jose Unified School District board to draft plans and specifications for construction of the new Sunol School to be built in the City of San Jose.

LIFEGUARD STATION

Los Angeles will spend $71,532, exclusive of site work and piling, for the construction of a lifeguard station to be built in North Manhattan Beach.

Supervision of plans and construction will be in charge of the Los Angeles County Engineer.

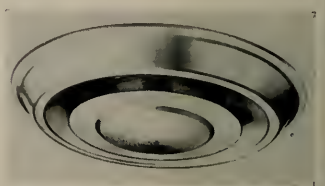
MAPES HOTEL ADDITION

Architect William C. Wagner of Los Angeles is completing plans for construction of an addition to the Mapes Hotel in Reno which will provide 240 additional rooms with bath, and a swimming pool.

The new construction will comprise an 8-story addition, plus basement, and will be of reinforced concrete.

RESIDENTIAL CEILING AIR DIFFUSER

A new residential ceiling air diffuser restyled to considerably reduce overall dimensions and with contours sharpened has been announced by Connor Engineering Corp.



The Kno-Draft capacity range has been increased to more than 750 cu. ft. of air per minute with the addition of a 10 and 12 in. diffuser, making these units suitable for small stores, offices and larger homes. Installation made simpler; sponge rubber gasket provides positive air seal. Catalog and complete engineering selection data for both heating and cooling obtainable from Connor Engineering Corp., 500 5th Ave., New York 36.

MEDICAL BUILDING

Architect Albert W. Kahl, AIA, San Mateo, is completing drawings for construction of a 7-suite Medical Building on San Mateo Drive in San Mateo at a cost of $100,000.

One and part two-story, with ground

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floor parking, the building will be frame and stucco, with structural steel and some brick veneer construction.

STATE LOAN FOR SCHOOL BUILDING

The Lincoln Unified School District of Stockton has been granted a California State Aid appropriation of $900,000, which, matched with a $900,000 school bond sale, will be used for construction of new high school and primary school buildings in the district.

Dana D. Corrough, Stockton, is the architect.

PAPER MILL SANTA CLARA

The firm of Albert C. Martin & Associates, Architects and Engineers of Los Angeles, are preparing plans for construction of a boxboard paper mill in the city of Santa Clara for the California Container Corp.

Estimated cost of the project is $6,300,000.

AUTOMOBILE AGENCY BUILDING

Architect Jerome G. Armstrong of San Bernardino is completing drawings for construction of a 1-story steel frame commercial building in Oceanside to be used as a Buick automobile agency by the Rorick Buick Agency.

The new building will contain 2160 sq. ft. of floor area.

SKATING RINK

The architectural firm of Evans & Lincoln, San Jose, are working on drawings for construction of a roller skating rink to be built in Santa Clara.

The building will be 1-story, reinforced concrete tilt-up construction; wood roof and maple flooring; and will contain 18,000 sq. ft. of area.

ARCHITECT SELECTED

Architect Joseph Esherick, AIA, has been selected by the Board of Regents of the University of California, Berkeley, to design an administration building on the Berkeley campus for the Pelican, University student publication.

Estimated cost of the work is $100,000.

SELF-PARKING GARAGE BLDG.

Structural Engineer R. H. Cooley of Oakland is completing drawings for construction of a 1-story, plus roof parking, Self-Parking Garage building to be built at Kittridge & Durant, near Shattuck Ave. in Berkeley.

Estimated to cost $300,000, the building will be of structural steel frame, reinforced concrete construction.

NEW LINE OF VALVES

The Northern Indiana Brass Company has recently issued a new catalog featuring the introduction of NIBCO's new line of Y-Pattern Swing Check Valves.

These valves are produced in both solder and threaded end styles, in 125 lb. S.W.P., and 150 lb. S.W.P. pressure ratings; sizes ⅜" through 2". The Y-Pattern design permits direct access to the flapper and disc assembly, providing easy maintenance without removing valves from line. Also insures positive closure the instant flow is interrupted, in either vertical or horizontal position. Individually boxed for identification and storage. Complete information from Northern Indiana Brass Co., Wilkhart, Indiana.

SCHOOL BONDS APPROVED

Voters of the Live Oak Union High School District, Sutter County, recently approved issuance and sale of $285,000 in school bonds with funds to be used in constructing a gymnasium addition to the Live Oak High School.

Architect Lawrence G. Thomson of Chico is working on drawings for the project.

ARCHITECT SELECTED

Architect Alton S. Lee of San Francisco has been selected by the City of Alameda to draft plans for construction of addi-

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tional shops and storage buildings to be built at the city's corporation yard in Alameda.

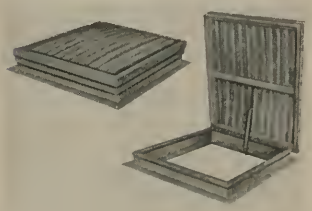
BERKELEY GETS NEW FIRE HOUSE

Architects Ratcliff & Ratcliff of Berkeley have been commissioned by the City of Berkeley to draft plans and specifications for construction of a new fire house to be built in the City of Berkeley.

Estimated cost is $75,000.

NEW SKYLIGHT ANNOUNCED

A new development in skylights fabricated of tough fiber glass reinforced translucent structural panels set in an extruded aluminum frame is announced.



Called the "Fire-Vent Model," it offers all the features of an outstanding fiber glass skylight yet gives automatic and immediate ventilation in case of fire. When fire or excessive heat occur a fusible link will separate, causing the cover section to open and remain open until manually closed.

Many code changes now require a percentage of roof area to be fire vented. Complete information from The Marco Company, 45 Greenwood Ave., East Orange, New Jersey.

NEW HALL OF JUSTICE BUILDING

The City of Oakland is acquiring a site for construction of a new Hall of Justice Building which will provide facilities for the city's police department, a city jail, and municipal courts.

Estimated cost of the project is $2,700,000.

ARCHITECT SELECTED

Architect Gordon Stafford of Sacramento has been commissioned by the Yuba City Union High School District to design an addition for the existing high school.

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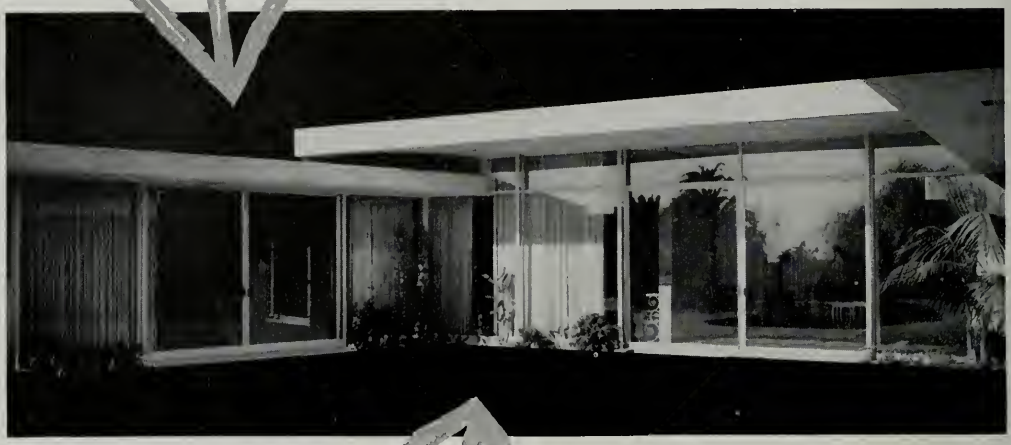

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ERNEST McAVOY, Manager

★

Cover Picture

COLOR PLANNING FOR TRACT HOMES

KLAUS PFEFFER
and
PEARL BUCK STEWARD
Color Consultants

Color planning of homes is becoming more important, to the buyer and to the builder.

For complete article and pictures, see Page 9.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

CONGRESS AND YOU

As a professional man, you undoubtedly do a lot of speculating about the state of mind of your client. After all, he is your boss.

As a politician, your Congressman does a lot of speculating about the state of your mind. After all, you are his boss.

In the current session, Congress will consider a lot of issues important to professional men and business: Taxes, Social Security, price supports, foreign aid, schoolhouse construction and education, foreign trade, water power and many others.

By letting your Congressman know what you think, you can play an effective part in determining the impact of such issues on your activities.

* * *

According to the U.S. Bureau of Labor Statistics, the average weekly wage of workers in manufacturing establishments was $76.11, or $3957 per year.

* * *

NEED FOR ENGINEERS

One industrial company out of every three in the country is suffering from an acute shortage of engineers, a situation that is viewed in some instances by management as "critical" and of "national proportions."

Observance of National Engineers' Week, last month, brought to light some very interesting facts in relation to future opportunities and even responsibilities of the engineering profession.

The normal national increase in population will almost double the consumer demand for goods and services within the next twenty years. This will greatly increase the need for production and to satisfy the foreseeable requirement, engineering know-how will have to be relied upon as the producer of needed results. Eliminating such purely theoretical solutions as a 57-hour work-week or a labor draft from the ranks of students, retired people or housewives, the only sensible answer is to find some way to get more done with fewer man-hours—and this definitely is an engineering challenge.

This challenge is real.

The national shortage of engineers has already reached a dangerous level in many areas, and the production of new engineers is steadily falling further and further behind the rapidly expanding needs. Only about one-half of the high schools in the nation offer courses preparatory to an engineering education, and between the years 1950 and 1954 there was a drop of 56% in the number of college graduates who could qualify to teach high school subjects.

Engineering societies and groups throughout the nation have repledged themselves to meet this problem and are offering educational guidance services, on-the-job training programs, and support of local technical schools and colleges.

The need for qualified engineers is certainly a real challenge—but, on the other hand, what a great opportunity for the student who desires and has the determination to become "an Engineer" and thereby take an unquestioned leadership in the advancement of modern living.

* * *

It seems certain that Suburbia, U.S.A., is likely to keep growing, but that does not mean downtown areas are dead—or are they?

* * *

"WHO'S WHO" IN ARCHITECTURE

Considerable emphasis is placed upon the need for, and support of, various types of "public relations programs" by many Chapters of the A.I.A.

Because the true concept of "Public Relations" is so little understood by so many, a large part of public relations effort is merely seeking personal recognition or the end results of what might be properly termed "advertising" or "publicity" programs. To attempt to point out the difference between "Public Relations," "Advertising" and "Publicity" is like describing the difference between an Advertising Agency, a Publicity Agent and a Public Relations Counselor; i.e, there is a difference between a Dentist and a Physician and Surgeon, there is a difference between a tradesman and a contractor, and there is a difference between an Architect and an Engineer. It would be fantastic for a Publicity Agent to contend he was an Advertising Agent, or a Public Relations Counselor; likewise a Dentist is not a Physician, and by the same token an Architect is not an Engineer.

The surest and safest and by far the most effective "Public Relations" program that any professional group, or member of a profession, can support is the national organization representing such a profession. In the case of the architect the most effective public relations effort that he can contribute to is a sincere support of The American Institute of Architects. If a member of the AIA, support the national program; if not a member then join immediately and lend your support to the overall objectives of your profession.

An outstanding example of impersonal, professional "Public Relations" is the recently published issue of "Who's Who" In Architecture. This book will do more to favorably promote the architectural profession than anything which has come to our attention in a good long time.

IMPORTANT NEWS ABOUT THE NEW GRADE NAMES*

FOR WEST COAST LUMBER

EFFECTIVE

MARCH 15

1956

Orders placed under Rule #14 may be graded and stamped under that rule *for a limited period* after March 15. This is to accommodate stocks in the process of manufacture or on hand at yards or mills.

All specifications for structures to be built after March 15, 1956, should be under the new rule, Rule #15.

If you have not received your free copy of Rule #15, write to West Coast Lumbermen's Association, 1410 S. W. Morrison, Portland 5, Oregon.

*Applies to Boards, Dimension and Timbers

DOUGLAS FIR • WEST COAST HEMLOCK

WESTERN RED CEDAR • SITKA SPRUCE

NEWS and COMMENT ON ART

CALIFORNIA SCHOOL OF FINE ARTS

The California School of Fine Arts, 800 Chestnut Street in San Francisco, has announced the curriculum for the 1956 summer session, scheduled to be held July 9th through August 17th. Classes will be held Tuesday and Thursday, and each course (except the young people's classes) requires two and a half hours of outside work and carries one unit of credit, making a maximum program of six units.

Students seeking credits will be required to show a high school diploma or transcript of previous training at an accredited school, and all students must be 18 years of age or more.

The scheduled curriculum includes: life drawing, drawing workshop, painting workshop, landscape,

M. H. de YOUNG MEMORIAL MUSEUM

GOLDEN GATE PARK, SAN FRANCISCO

SECRETARY

Made For
Marie Antoinette
by the ebeniste
Jean-Henri Riesener

French
Late 18th Century

This Secretary of ebony with Japanese lacquer and gilt bronze was made for Marie Antoinette by the famous cabinet maker Jean-Henri Riesener in the late 18th century.

It is one of the magnificent French period pieces contained in the Roscoe and Margaret Oakes collection in the M. H. de Young Museum in Golden Gate Park, San Francisco.

water color, graphics, serigraphy, sculpture, teaching workshop, children, life drawing and painting.

KATE NEAL KINLEY MEMORIAL FELLOWSHIP

By authority of the Board of Trustees of the University of Illinois, the Committee in charge has announced the twenty-fifth annual consideration of candidates for the Kate Neal Kinley Memorial Fellowship established in 1931 by the late President-Emeritus David Kinley in memory of his wife and in recognition of her influence in promoting the Fine Arts and similar interest upon the Campus.

The Fellowship yields the sum of one thousand three hundred dollars to be spent by the recipient towards the expenses of advanced study in the Fine Arts in America or abroad.

The Kate Neal Kinley Memorial Fellowship is open to graduates of the College of Fine and Applied Arts of the University of Illinois and to graduates of similar institutions of equal educational standing whose principal or major studies have been in one of the following: Music, Art or Architecture. Complete information may be obtained from Dean Allen S. Weller, College of Fine and Applied Arts, Room 110, Architecture Bldg., University of Illinois, Urbana, Illinois.

MORRISON STREET GALLERY PORTLAND, OREGON

World Premiere of the Walter P. Chrysler, Jr., Collection of 100 paintings and a special group showing of the Oregon State College Art Department Faculty which includes Paintings, Prints and Sculptures.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is offering the following schedule of exhibitions and special events for this month:

EXHIBITIONS: The Rental Gallery; Tapestries by Hannah Ryggen; 75th Annual Painting and Sculpture Exhibition of the San Francisco Art Association; The New Decade, comprising 22 European Painters and Sculptors, organized by the Museum of Modern Art, New York; and Photographs by Chester Kessler and Lawrence H. Parks.

EVENTS: Lecture Tours, based upon current exhibitions, are conducted each Sunday afternoon at 3 o'clock; other events include Concerts, each Wednesday evening, Panel Discussions, Preview of coming exhibits, Composers' Forum, and Adventures in Drawing and Painting, which includes the Sketch Club, and a Painting Class. The Studio, offers Art for the Layman, and the Children's Art Classes are conducted each Saturday morning.

The Museum is open daily.

SEATTLE'S CARL F. GOULD MEMORIAL GALLERY OPENS

The new addition to the Seattle Art Museum, dedicated to the memory of architect Carl Frelinghuysen Gould, designer of the original museum structure, was opened to the public last month. Carl F. Gould, Jr., associated with Young, Richardson, Carleton and Detlie in the construction of the gallery which features movable walls and is especially notable for its flexibility and well resolved lighting.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, presents the following schedule of exhibitions and events during March:

EXHIBITS: Color Woodcuts by Utamaro, 1752-1806, lent by Mr. and Mrs. Edwin Grabhorn; Paintings by Paul Wonner; Saccaro, selected paintings 1952-'56; and Paintings by Irma Engel.

EVENTS: A series of lectures, illustrated with examples from Museum collections will include "The Byzantine Tradition," "Italian Paintings, Gothic and Renaissance," and "French and Italian Paintings — 17th-18th Centuries." Classes in Art Enjoyment for adults include Exercises in Clay Modeling and Oil Painting; Painting Workshop for Amateurs, and Seminars in the History of Art. For the children are classes in Picture Making, Art and Nature, and the Art Club.

The Museum is open daily.

GRETE WILLIAMS GALLERY

The Grete Williams Gallery, 2050 Union Street, San Francisco, is currently exhibiting a special group of Oil Paintings by Marian Jellinek, and Jewelry Designs by The Metal Arts Guild of the Bay Area.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an exhibition of Oils by Kenneth Goehring; an exhibition of Watercolors by S. F. B. Morse; and Collages by Joseph St. Amand.

A special group of Original Prints is being shown in the Little Gallery.

SAN FRANCISCO ART ASSOCIATION

The San Francisco Art Association has opened a Gallery at 800 Chestnut Street in San Francisco, which will be dedicated to one man exhibitions by outstanding American artists.

AUTOMOBILE SALES, Showroom and Service.

ARIZONA AUTOMOBILE AGENCY

QUEBEDEAU CHEVROLET COMPANY

Phoenix, Arizona

ARCHITECT:
VICTOR GRUEN, A.I.A.
RALPH HAVER, A.I.A.
Supervising Architect

CONTRACTOR:
MARDIAN CONSTRUCTION CO.

The building consists of two major portions: The showroom proper, and the administrative and sales offices. The showroom is surrounded by a maximum of glass (set in aluminum mullions) extending from the elevated floor to the ceiling, while the exterior of the office portion consists of exposed concrete block walls, stucco spandrels and steel casement windows. The entire building is covered with a pitched roof featuring a 15-foot cantilevered overhang at the show windows, affording the utmost sun protection. The building is completely air conditioned and the showroom lighting is accomplished by a combination of recessed spotlights and fluorescent lights designed for high light intensity, and providing a type of lighting which is most flattering to the car display. Used car sales facilities are integrated with the showroom proper by a continuous canopy along Grand Avenue, surrounding the outdoor display area and extending into the building to become a balcony and lounge from which an overhead view of the showroom is obtained.

SHOWROOM is outstanding example in state of Arizona.

STANFORD
SHOPPING CENTER

CROCKER-ANGLO NATIONAL BANK

PALO ALTO
CALIFORNIA

ARCHITECTS:

WELTON BECKET & ASSOCIATES, AIA
(EXTERIOR)

SKIDMORE, OWINGS & MERRILL, AIA
(INTERIOR)

A new, modern banking facility in the rapidly developing Stanford Shopping Center at Palo Alto, opened on Monday, February 13, under the name Crocker-Anglo National Bank, representing the recently combined Crocker First National Bank and the Anglo California Bank, both of which antecede the era of the Gold Rush days.

An open-house preview of the Stanford Center office was held with residents and businessmen of the Palo Alto area greeted by Roy A. LeBaron, assistant manager. Crocker-Anglo officials attending a special ribbon-cutting ceremony, included W. W. Crocker, chairman of Crocker Bank and Paul E. Hoover, president of Anglo; J. F. Sullivan, Jr., chairman of the executive committee, Paul B. Kelly, 1st vice president, and William Pflueger, executive vice president. Refreshments were served and souvenirs given to visitors.

The new banking office, located in the shopping center west of El Camino Real, covers 7200 square feet of floor space. The exterior design of the building follows the architectural style used throughout the center. A row of aluminum-trimmed windows extends across the front, with a panel of scored concrete above. A night-and-holiday depository is located on the south wall. Ample parking facilities are available adjacent to the bank, which is also accessible to foot traffic from the center of the shopping center.

The interior features a luminous ceiling of fluorescent lighting and a mezzanine across the rear. There are opposite entrances at the front and back of the office and provision has been made for twelve commercial tellers' windows in the main banking area.

TOP VIEW: Exterior with marquee and planting areas in front of Bank still under construction.

AT LEFT: Interior arrangement; Officials work area at right, cashier's and customers service at left—brick end wall.

ARCHITECT DESCRIBES DESIGN OF THULE AIR BASE IN GREENLAND

Solving the obstacles and problems of designing the Thule Air Base in ice-packed northern Greenland and other Arctic installations was the subject of a talk given by Mr. Gannett Herwig, partner, LaPierre, Litchfield & Partners, architects, at the Architectural League of New York. Guests included Colonels Bognulo and Duke, U.S. Army Corps of Engineers, Eastern Ocean District, and a group of engineers.

Few facts were known before the architectural firm, in conjunction with Metcalf and Eddy, Boston consulting engineers and the U.S. Army Corps of Engineers, undertook the design of Thule air base, one of the northernmost outposts in the U.S. defensive air network, as well as the DEW (Distant Early Warning) line, for the Western Electric Co. and the U.S. Air Force, across the top of the continent.

Hampered by their meager knowledge of the terrain, permafrost, 40-below temperatures and wind conditions, the architects, nevertheless, made it possible for construction to begin in Thule within four months, stated Mr. Herwig.

He discussed and illustrated with color slides the problems of perma-frost, building materials, foundations, pouring concrete in sub-zero weather, the design of ice cap dwellings, and the arctic conditions under which work was carried out.

Devising workable foundations in permafrost, the architects sunk piles with augers or placed heavy beds of gravel over the frozen ground to support the buildings.

Buildings were first prefabricated from aluminum-clad plywood, then, in successive years, from metal and finally from precast concrete, as experiments in the field led to improvements in design.

Complete houses, assembled at construction camps, equipment, and other supplies often had to be hauled over Alaskan ice and snow for distances as great as 200 miles. Mr. Herwig reported that not one sled was overturned or lost. Tractor weasels were used as the work horses of the north. "Without tractors, we couldn't have moved an inch," said the architect.

One special design covered by Mr. Herwig was the sub-snow type of building which "sinks" as the ice and snow accumulates around it. These unusual arctic dwellings look something like submarines, and have a conning tower escape hatch rising from the top. As they "sink," at a rate of 12 inches a year, sections are added to the exit tower to keep the entrance above the snow. Inside, everything necessary to support life in the Arctic from complete modern kitchens to ping-pong tables, can be found.

"The Arctic yields reluctantly to the encroachment of civilization, and much work needs to be done to improve the economics and durability of construction in our northern bases," concluded Mr. Herwig.

HENRY J. BRUNNIER HIGHLY HONORED BY ENGINEERS

Henry J. Brunnier, consulting structural engineer of San Francisco, was named the "Outstanding Bay Area Engineer of 1956" at an Awards Luncheon sponsored by the Bay Area Engineers' Week Committee in the Sheraton-Palace Hotel.

He was cited by the committee as being "truly representative of the best traditions of the engineering profession," and was chosen for the award in recognition of his outstanding contributions to his profession and to the welfare of his community.

Brunnier was a member of the five man Consulting Engineers Board for construction of the $77,000,000 San Francisco-Oakland Bay Bridge. His designs were also employed in the construction of the Russ Building, the Standard Oil Building, and the Shell Building, along with a host of other major projects. Recognized as one of the top authorities on earthquake design and difficult foundation problems, he has traveled more than 600,000 miles to investigate quake damage and make suggestions for improved building codes. He was decorated by the Civil Engineering Society of Japan and the Architectural Institute of Japan for his work in that country. An honorary member of the El Institute de Ingeneros de Chile, an Officier de l'Ordre de la Couronne of Belgium, and an officer of the Legion d'Honneur of France, he was nominated for the award by the San Francisco Section of the American Society of Civil Engineers and the Structural Engineers Association of Northern California.

Morrough P. O'Brien, dean of engineering at the University of California and chairman of the 1956 Bay Area Engineers' Week Committee, was toastmaster for the luncheon at which more than 500 engineers and civic leaders were present.

Awards were also presented to eleven other Bay Area engineers in recognition of their outstanding contributions to their communities and their societies, including:

J. C. Beckett, Kentfield, Chief Engineer of the Wesix Electric Heater Co. of San Francisco; John D. Bradley, Burlingame, Executive Vice-President and director of the Bradley Mining Co., San Francisco; Col. William F. Cassidy, Burlingame, Division Engineer, South Pacific Division, Corps of Engineers, U.S. Army, San Francisco; Leo Dwyer, San Anselmo, Chief Mechanical Engineer, Clyde C. Bently, Consulting Engineers, San Francisco.

Walter Kassebohm, Berkeley, vice-president of manufacturing, Marchant Calculators, Inc., Emery-

(See page 34)

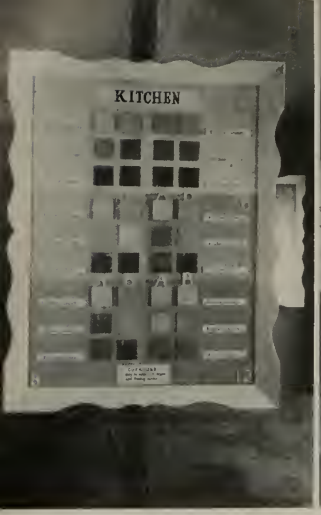
Maple House, Villa Hermosa, San Lorenzo, California

COLOR PLANNING FOR TRACT HOMES

by color consultants

KLAUS PFEFFER and PEARL BANK STEWARD

Kingswood, Irvington, California



Kitchens

aice of twelve schemes of har-
zing paints, kitchen cabinets,
ter tops and esphalt tiles are
n on this board at Kingswood.

Paint Colors

People who do not care for wall-papers can make a selection from six deep tones and six lighter shades of paint.

Bathrooms

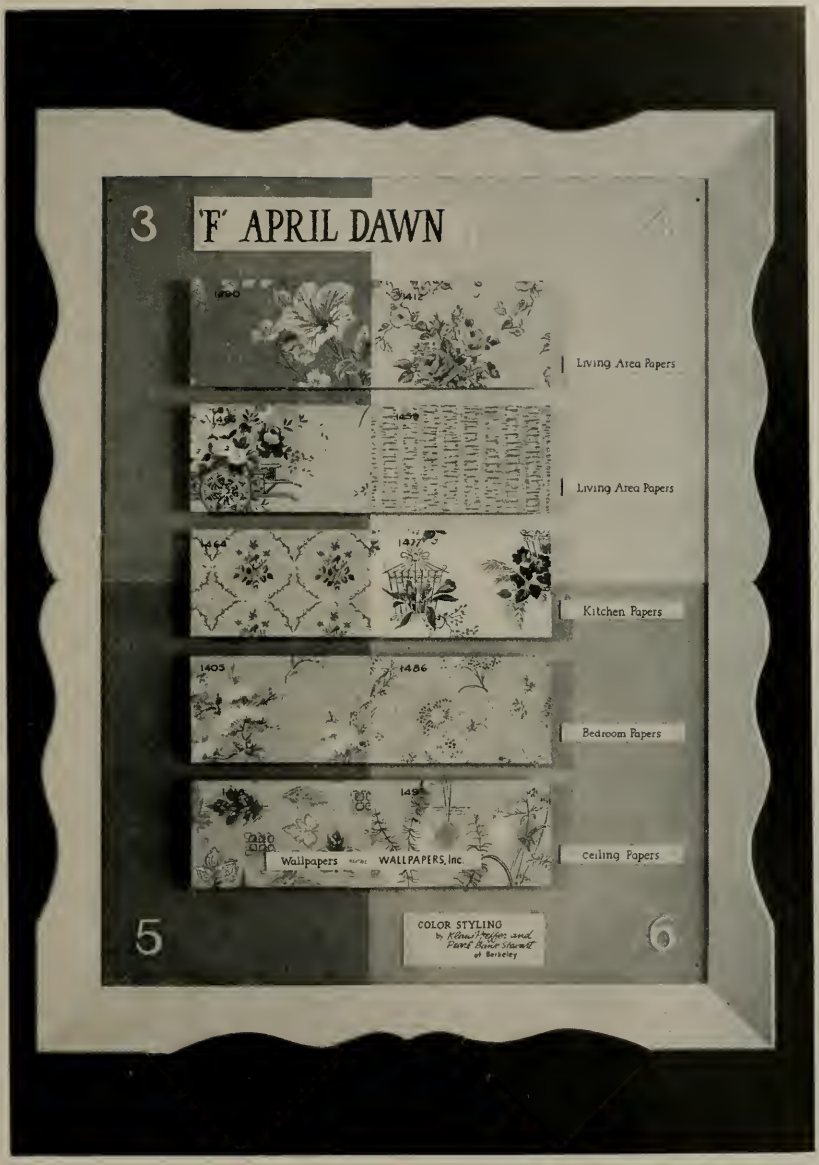
Twelve color coordinated selections of ceramic tiles, counter tops and asphalt tiles are available to Kingswood buyers.

DISPLAY ROOM OF COLOR BOARDS

at KINGSWOOD in Irvington, California

During this period of increasing competition between tract builders the color planning of homes is becoming steadily more important. The bright hues of our new cars and the constant accent on color in the widely read home magazines have developed an unprecedented color conscicusness in the home buying public. It is not unusual to see sales at a virtual standstill in tracts where color is limited to the trite uninteresting pastels whereas, right across the road, quite similar houses sparked by deep toned paints and skillfully coordinated wallpapers attract a constant stream of buyers. An exceptionally effective example of color styling is this display room at Kingswood designed by Klaus Pfeffer and Pearl Bank Steward.

all photos by BARRY EVANS



One of eight color coordinated combinations of paints and harmonizing wallpapers which give a selection of twelve interior paint colors and eighty wallpapers to buyers of homes at Kingswood. Each board is 36"x48" and framed in white. Descriptive names such as Morning Mist for pink and grey, Mountain Meadow for green and yellow and April Dawn for pink and blue have proved highly popular with the public.

Stairway is dramatized by contrasting painted surface of stair rail with patterned stair wall.

Cathedral ceiling is accented by extending figured paper to full height of gable wall.

Three examples of accenting architectural features through skillful placement of wallpapers by Klaus Pfeffer and Pearl Bank Steward.

The pleasant texture of wallpaper introduces warmth and coziness into this kitchen and family area at Vista Manor in Centerville, California.

Black and white basket weave textured paper on the gable area of this model house at Villa Hermosa in San Lorenza, California, brings softness to a large expanse of wall which might otherwise appear stark and uninviting.

Green and white lattice paper in dining area at left makes a bridge from white wall on one side to green on the other.

Coral color of ceiling at right glows handsomely above pale grey gable wall and grey papered dining corner.

Wallpapers appropriately selected can be just as effective in modern interiors as in rooms of more traditional design.

CHINA JADE
RECOMMENDED FOR WALNUT and MAHOGANY
FOR LIVING AND DINING AREA
FOR FAMILY AREA
FOR MASTER BEDROOM
FOR THIRD BEDROOM
FAMILY'S KITCHEN AREA FLOOR TILE
FORMICA KITCHEN COUNTER TOP
BATH NO. 1 FLOOR TILE
BATH NO. 1 CERAMIC TILE
BATH NO. 1 FORMICA COUNTER TOP
MASTER BATH FLOOR TILE
MASTER BATH CERAMIC TILE
THE BACKGROUND PRINT COLOR ON THE LEFT AND RIGHT SIDES OF THIS BOARD MAY BE SUBSTITUTED FOR ANY OR ALL WALLPAPERS
LIVING AND DINING AREA
FAMILY AREA
MASTER BEDROOM
THIRD BEDROOM
ALTERNATE SCHEME WALLPAPERS
COLOR STYLING BY
Klaus Pfeffer and Pearl Bank Steward
WALLPAPER BY WALLPAPERS INC.

The color boards at Villa Hermosa differ from the ones at Kingswood in showing all materials for an entire house on a single panel instead of offering separate selections for kitchens and bathrooms. Three different schemes can be seen on each board. On the left side a group of wallpapers of modern design. On the right a group of papers of traditional design. In the center Asphalt Tiles, Counter Tops and Ceramic Tiles harmonizing with either group of wallpapers or with the paints alone.

A special touch of showmanship is brought to this display of eight color boards by showing four of them against a white background and the other four against black.

DISPLAY ROOM OF COLOR BOARDS

at VILLA HERMOSA in San Lorenzo, California

all color planning by KLAUS PFEFFER and PEARL BANK STEWARD

Villa Hermosa, San Lorenzo, California

Decoratively the most neglected rooms in most tract houses are the bedrooms which are usually uninteresting cubicles painted in innocuous shades of pale pink, blue, grey or yellow. The startling drama of the bedroom above with its deep green ceiling and green jungle paper on a yellow ground, or the more delicately colored bedroom below in soft pinks and greys, have an equally magnetic allure.

Paints and wallpapers for these rooms were selected from the color boards designed by Klaus Pfeffer and Pearl Bank Steward, for Villa Hermosa in San Lorenzo, California.

Wallpaper looks equally well on a level ceiling as at left, or on a sloping ceiling as below and can be used successfully with either contemporary or period furnishings.

A wallpopered ceiling is invariably a conversation piece in model homes, giving that touch of individuality rarely found outside of expensive custom decorating jobs.

covered "VILLA HERMOSA"

wallpapers inc.

...your best source of a complete line of wallpaper, including

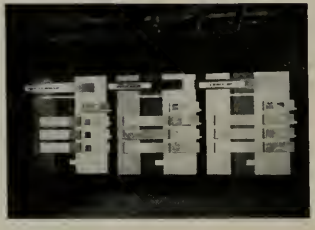
- MURALS
- GRASSCLOTHS
- HANDPRINTS
- SCENICS
- VINYLS

S SOMETHING NEW!

wallpapers inc.

OAKLAND: 584 Grand Avenue
SAN FRANCISCO: 1136 Sutter Street, at Amthors

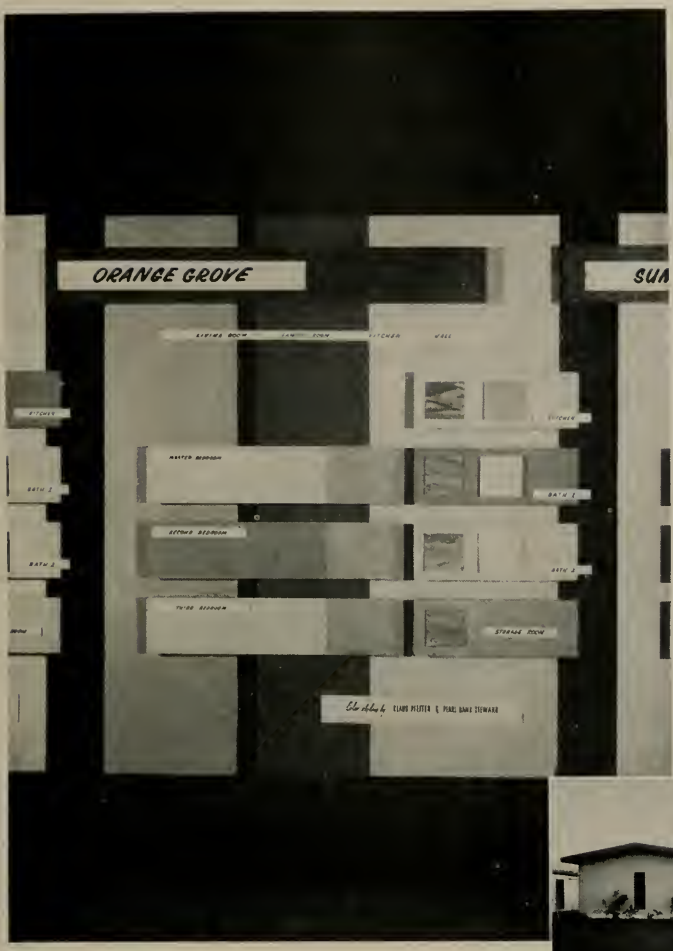
An example of an effective background for modern furnishings achieved without wallpaper.



Display room at Cambrian Park Manor.

Where wallpapers are not used, as in these model homes at Cambrian Park Manor in San Jose, California, deep paint colors harmoniously combined with the richness of textured glass, wood panelling, ornamental wood screens and large surfaces of brick can bring warmth and individuality to the interiors.

Provincial furnishings look at home in this living room where no wallpaper is used.



Color boards without the pattern of wallpapers to enliven them can be given visual interest through bold design and striking three dimensional composition as in these panels at Cambrian Park Manor.

Exterior colors in model homes should be keyed to harmonize with those of the interior.

AIR VIEW OF THE EASTERN ENTRANCE

THE ST. LAWRENCE SEAWAY

By HON. LIONEL CHEVRIER, *President*
St. Lawrence Seaway Authority

The St. Lawrence Seaway is essentially a water highway from the sea to the heartland of North America. Since the days of the first half of the 16th Century when the explorer Jacques Cartier was turned back by the rushing waters of the Lachine Rapids from his dream of finding the Northwest Passage and the route to the rich and glamorous East, men have devoted their thoughts and their works to the building of a deep waterway from the Atlantic Ocean into the great inland lakes. Today, but for a small portion, this dream has been realized.

There remains, however, a 14-foot bottleneck between Montreal and Prescott which must be removed and the provision of deeper channels between Lake Ontario and Lake Erie to allow 27-foot navigation throughout the St. Lawrence.

To provide this navigational facility is a mighty task and for its accomplishment and future operation The St. Lawrence Seaway Authority was constituted.

The St. Lawrence Seaway Authority, a Crown Corporation, was established by Act of Parliament in December, 1951. The Act was proclaimed and the appointment of its members made public on July 1, 1954.

The Authority is incorporated for the purpose of (a) Acquiring lands for and constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie; (b) Constructing, maintaining and operating

all such works in connection with such a deep waterway as the Governor in Council may deem necessary to fulfill any obligation undertaken by Canada pursuant to any present of future agreement.

INTERNATIONAL NEGOTIATIONS

Although the subject had been considered for over a century, the first concerted action of the Governments of Canada and the United States in connection with a deep waterway from the Great Lakes to the sea may be said to date at least as far back as 1905. Then a joint International Waterways Commission was created to deal with all matters relating to international waters between Canada and the United States.

Negotiations were begun and continued over the years with the end in view of finally establishing a deep waterway throughout the whole St. Lawrence Basin.

No subject has been more thoroughly discussed, none more carefully studied. All of these studies culminated in first, the Treaty of Washington signed between Canada and the United States in 1932 which was not approved by the United States Senate. Next followed the Great Lakes-St. Lawrence Basin Agreement of 1941 concerning a deep waterway from Montreal to the head of the Great Lakes. This agreement failed to receive the approval of the United States Congress.

After ten years without progress because of the failure to get approval of the Agreement and because further development of hydro-electric power in Southern Ontario became of considerable importance to Canada (and also to the United States), a new approach was adopted by Canada. The first step was the conclusion of an agreement in December 1951 between the Governments of Canada and Ontario. This agreement provided for the construction of the seaway by the Federal Government of Canada and for the development of power in the International Rapids Section by Ontario and an entity to be designated by the United States.

The next step was to secure the approval of the Canadian Parliament for this agreement and legislation to provide for the construction of the seaway. Parliament approved the agreement and enacted legislation for the establishment of The St. Lawrence Seaway Authority in December 1951.

The third step resulted, in June 1952, in agreement between Canada and the United States whereby both countries would join in asking the International Joint Commission (which has jurisdiction over these boundary waters of the International Rapids Section) to

SITE of the powerhouses in the International Rapids section of the St. Lawrence River which will develop 2,200,000 h.p. electricity. Two U.S. locks will by-pass the power pool.

approve the joint development of power in that Section by the Hydro Electric Power Commission of Ontario and a power entity to be named by the United States. It was understood that Canada would build all the navigation facilities on the Canadian side between Montreal and Lake Erie to provide for 27-foot navigation. The International Joint Commission approved this power project on October 29, 1952.

In June, 1953, the United States Federal Power Commission issued an order granting a 50-year license to the Power Authority of the State of New York for the development of the United States half of the power project in the International Rapids Section in conjunction with Ontario Hydro.

This did not constitute the final authority to construct the joint power project because the Federal Power Commission's order was challenged in the United States Courts by opponents of the project. The United States Supreme Court, in June 1954, upheld the action of the Federal Power Commission in granting a license to the Power Authority of the State of New York. This decision enabled the power entities to undertake construction of their project. By the construction of the power project, a lake would be created in the International Section, which would allow the construction of the seaway.

In the meantime, however, the United States Congress enacted the Wiley-Dondero Act authorizing and directing the Saint Lawrence Seaway Development Corporation to construct on United States territory all the navigation facilities in the International Rapids Section.

The situation thereby created called for discussions between Canadian and United States representatives to determine how the seaway would be built. In the final analysis, the United States decided to build a canal and two locks opposite Barnhart Island in the International Rapids Section and to do dredging in the Thousand Islands Section. Canada decided to build a lock and canal near Iroquois in the International Rapids Section in addition to completing all the necessary navigation facilities in Canadian territory between the Port of Montreal and Lake Erie. The estimated costs of the United States works are about $80 million while the estimated costs of the Canadian works are about $200 million.

Work was begun on the power project in August 1954. Thereafter it was possible to start work on the seaway. The preliminary works on the Canadian side were undertaken in September 1954.

SHIP CHANNEL between Jacques Cartier and Victoria bridges—3,000,000 cu.yds. of rock excavation in 7,600 ft. of channel.

WORKS PROJECTED

LACHINE SECTION

This section of the St. Lawrence seaway extends from the Harbour of Montreal to the head of Lake St. Louis. The drop in the level of water in this section is 50 feet and most of it is in the Lachine Rapids.

The first recorded improvement in the long history of navigation on the St. Lawrence waterway dates back to 1700, when a one-and-a-half-foot canal was constructed at the Little River St. Pierre near Lachine.

In 1780 and 1804 short side canals having two to three feet in depth were constructed at the edge of the rapids. Using them were, among other craft, the huge freight-carrying canots de maitre of the fur-trading companies as they plied between their base at Montreal and the remote posts of the West.

It was only in 1821 that the first Lachine Canal proper was undertaken. From a five-foot depth this canal was deepened to 9 feet between 1843 and 1848. A second and last enlargement, between 1870 and 1883, provided a 14-foot depth throughout. This Lachine Canal, now eight and three-quarter miles long, has a total lift of 50 feet and gives access from the Port of Montreal to Lake St. Louis, that widening in the St. Lawrence River which is increased by the confluence with the Ottawa River from the North and West.

The St. Lawrence Seaway Authority will build a 10-mile canal with considerable channel enlargement extending from deep water in Montreal Harbour to Lake St. Louis above Caughnawaga.

This canal entrance will be a short distance East of Jacques-Cartier Bridge, will follow the South Shore, partly in the Laprairie Basin and partly inland. There will be two locks, one at Victoria Bridge and one at Cote Ste. Catherine, opposite the Lachine Rapids. These locks will have the same dimensions as those for the Welland Ship Canal.

In 1947, a Board of Engineers was established by the Government of Canada to consider whether the scheme for the improvement of the Lachine Section as recommended by the Joint Board of Engineers in 1926 provided to the best advantage for such improvement and if not, what alternative scheme it would recommend. The Board made public its report, which was widely circulated in 1948, and recommended to the Government two schemes for power and navigation and one scheme for navigation alone. The plan which the St. Lawrence Seaway Authority has adopted for the Lachine Section is the same in all respects as the one contained in the report of 1948 save and except that the canal is on the South side. In other words, under present plans, the canal—from Lachine Rapids to Montreal Harbour—is on the land side of the embankment in Laprairie Basin as well as from Victoria Bridge to the Harbour.

The principal reason for placing the canal on the South side around Laprairie Basin is that it would permit the extension of the Montreal Harbour to this area and create an important industrial area adjacent to Montreal. There are other important reasons for this change:

(i) It is easier to cope with both the present and future highway communications between Montreal and the South shore under the proposed plan of development.

(ii) It avoids bringing the large Upper Lakers through St. Mary's current and the congested area of the Montreal Harbour.

(iii) Railway traffic conditions at Victoria Bridge are materially improved as compared with a railway-canal crossing at the Montreal end of that bridge.

Modifications to Bridges

The seaway regulations provide that bridges across navigable streams shall have a minimum clearance of 120 feet. Since the canal skirts the South shore at Longueuil and the southerly spans of the Jacques Cartier Bridge do not provide such clearance, it becomes necessary to elevate the bridge.

Plans and designs have been prepared for this work together with a modern approach to the bridge from the South. This work is being done in cooperation with the Quebec Highway Department. Concurrently with this work, the National Harbours Board are proceeding with plans to add an additional traffic lane on the downstream side of the bridge. When these additions are completed, transportation facilities across Jacques Cartier Bridge will be materially improved.

The matter of elevating Victoria Bridge, however, is more complicated. This is a low-level bridge and to co-ordinate highway facilities with the rights of navigation presents a difficult problem.

The bridge is the property of the Canadian National Railways. Their engineers and those of The St. Lawrence Authority have agreed upon a plan to provide maintenance of the normal flow of traffic. A lift span will be installed over the proposed canal and an added vehicular traffic lane will be available with the removal of tracks of the Montreal and Southern Counties Railway. The Board of Transport Commissioners for Canada have authorized the removal of the tracks and the C.N.R. will proceed to construct a downstream lane for motor vehicles on

the Victoria Bridge.

Use of the proposed canal embankment for a short distance will permit uninterrupted vehicular traffic across the proposed seaway. The plan will be coordinated with plans for improvement of highway facilities across Victoria Bridge.

The southerly end of the Honore Mercier Bridge will be elevated and a satisfactory approach to the bridge from the Caughnawaga side will be constructed. This will be done in co-operation with provincial highway authorities.

A moveable span will also have to be installed in the Canadian Pacific Railway bridge at Caughnawaga.

It will be noted that the channel proceeds overland from the Cote Ste. Catherine Lock to by-pass the Lachine Rapids.

Turning basins will be constructed to allow ships, both deep-sea and lake carriers, to manoeuvre more freely in and out of the Lachine Section.

To provide 27-foot navigation to the head of Lake St. Louis the channel is being dredged through the lake from the end of the channel and dyke construction above Caughnawaga to the beginning of the Soulanges Section.

SOULANGES AND BEAUHARNOIS CANALS

The Soulanges Section extends from the head of Lake St. Louis to the foot of Lake St. Francis and is 18 miles in length. The total fall in this section is some 82 feet, which is featured by the Cascades, Split Rock, Cedars and Coteau Rapids. To pass these, the Soulanges Canal now offers 14-foot navigation.

Between 1779 and 1783, the Royal Engineers constructed four side canals with locks six feet wide, giving two-and-one-half-foot depth to overcome the Cascades, Split Rock, Cedars and Coteau Rapids, in ascending order.

The Beauharnois Canal, on the southerly shore, built between 1842 and 1845, replaced these earlier canals and provided 9-foot navigation. It, in turn, was replaced by the present Soulanges Canal on the opposite side of the river, begun in 1892 and completed in 1899. It has five locks, a total lift of 84 feet and provides 14-foot navigation.

The new seaway, however, will make use of the Beauharnois Power Canal.

Power installations at the easterly end of the Beauharnois Power Canal must be by-passed, and it is proposed to install here locks in flight to lift vessels from Lake St. Louis to the level of the Beauharnois Power Canal. This canal was built with the scheme in mind of using it for navigation, if and when the 27-foot seaway plan should become a reality.

This power canal is 16 miles long and is flanked by embankments about 3,300 feet apart.

The part of the power canal which will be used for navigation is presently crossed by two combined highway and railway bridges consisting of fixed spans. The parts of the substructures of these two bridges adjacent to the navigation portion of the canal are built to provide for the future installation of vertical lift bridges which will provide a clear horizontal width of 200 feet and a vertical clearance of 120 feet.

Modifications to two other bridges must be made to provide for traffic over the canal.

LAKE ST. FRANCIS SECTION

This section, which lies wholly in Canada, is 26 miles long. It is a widening in the St. Lawrence River, has an area of about 90 square miles and has a total drop from one end to the other of about one foot.

To provide 27-foot navigation in this section, dredging of shoal areas over the proposed seaway course is all that is required.

INTERNATIONAL RAPIDS SECTION

The International Rapids Section, extending from the western end of Lake St. Francis to Chimney Point, four miles east of Prescott, Ontario, is 47 miles long with a total difference of water level of 92 feet.

In this section just west of Cornwall will be located the power houses capable of developing 2,200,000 horsepower of electricity now under construction by the Hydro-Electric Power Commission of Ontario and the Power Authority of the State of New York. The main power features are:

1. A dam below the Long Sault Rapids from the American mainland to the head of Barnhart Island, and two powerhouses (divided only by the international boundary line) from the foot of Barnhart Island to the Canadian mainland just above Cornwall, Ontario. 2. An upper control dam in the vicinity of Iroquois Point. 3. Dykes, where feasible, to retain the pool level and reduce flooding. 4. The relocation of highways. 5. The relocation of railways. 6. Extensive channel enlargements.

Thus will be created an artificial "Seaway Lake," some thirty miles in length and from one and a half to four miles in width.

The essential navigation works consist of two canals, one on Canadian territory at Iroquois, with one lock to by-pass the control dam, the other on American territory opposite Cornwall with two locks to by-pass the main dam and powerhouses.

The St. Lawrence Seaway Authority is building the lock and canal at Iroquois, and the Saint Lawrence Seaway Development Corporation is building the canal and two locks (one at Grass River and the other at Robinson Bay) on the American side.

(See page 34)

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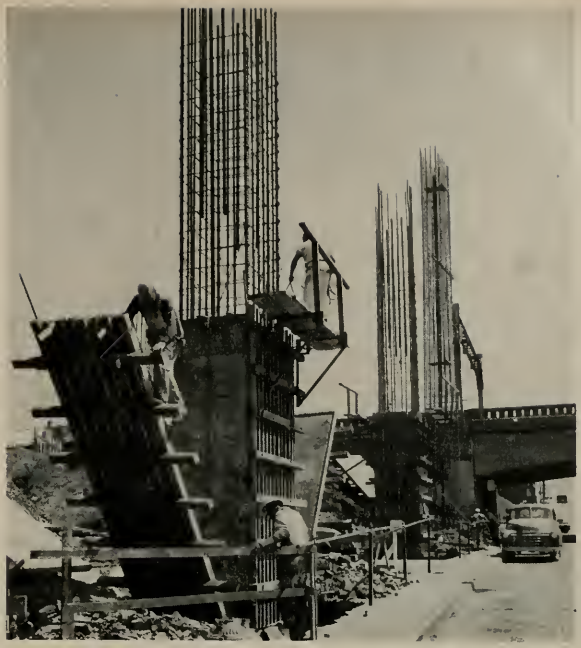

The concrete "legs" for San Francisco's new Embarcadero Freeway are being built with the heaviest steel reinforcing bars ever used in overhead highway construction in California's ever expanding State Highway system.

To strengthen the concrete piers and girders of this new portion of highway, more than a thousand tons of steel bars, measuring 2⅜" in thickness, are being produced at the Pittsburg, California, plant of U.S. Steel's Columbia Geneva Division. Use of the large bars permits better concrete distribution than would be possible with smaller conventional size bars and affords the required absorption of the weight of moving traffic and steel girders with fewer bars.

Round reinforcing bars as large as 2⅜" have had limited use in recent years on large concrete construction projects, such as bridges, dams and buildings. This is the first time that bars this size have been specified for a project such as the Embarcadero overhead highway, latest link in skyways of San Francisco.

INTERNATIONAL COMPETITION FOR DESIGN STATE OPERA HOUSE IN SYDNEY

By FRANCES MINAHAN

The Government of New South Wales has announced that a prize of approximately $12,000 will be awarded for the best design submitted in an international competition for a new State Opera House to be built in Sydney. The competition will close in December 1956, and in addition to the first award, substantial awards will be given for second and third selection.

A unique setting for the structure has been selected on the foreshores of Sydney's magnificent harbor on Benelong Point, a headland near Government House, and adjacent to the park surroundings of the Botanical Gardens.

The Opera House is to consist of two halls, one with a seating capacity of 3,500 and the other to seat 1,200 people. It is hoped to cater not only for the production of operas, but also for ballet, choral and orchestral performances.

A panel of four assessors has been appointed—two Australian architects and one from the United Kingdom and one from the United States.

The Australians are Dean of the Faculty of Architecture at Sydney University, Professor H. Ingham Ashworth and the New South Wales Government Architect, Mr. Cobden Parkes. The overseas architects are Dr. Leslie Martin (England) and Finnish-born Mr. Eero Saarinen, who is the son of a famous

(See page 33)

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OREGON CHAPTER

"Prognostications of Things to Come" was the theme of the February meeting held at Ireland's at Lloyds in Portland, and devoted to chapter business matters.

The Annual Banquet was observed on February 28 at the Riverside Country Club, with Dr. O. Meredith Wilson, President of the University of Oregon, speaking on "The Architect in Contemporary Society." Charles R. Halloway, Jr., vice-president, Portland Coke and Gas Company, served as toastmaster.

CALIFORNIA COUNCIL OF ARCHITECTS

The California Council of Architects will hold their 1956 annual convention in Yosemite Park, October 10-14, according to a recent announcement by John Lyon Reid, Council President. Headquarters will be at the new Yosemite Lodge, now under construction, and it is expected some 700 architects and guests will be present.

William Corlett, San Francisco, is chairman of a special committee working on a "professional program."

WASHINGTON STATE CHAPTER

A series of Seminars on Architectural Practice is being conducted under sponsorship of the Chapter. Included are such subjects as: Estimating Construction Costs; Use of Paint, Stain and Plastics; Use of

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Producers' Council — Northern California Chapter (See Special Page)

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Meetings are open to all architects and are held each Monday in the AGC Meeting Room.

SOUTHERN CALIFORNIA CHAPTER

Garrett Eckbo, Landscape Architect, was the principal speaker at a recent meeting in the Hollywood Athletic Club, Hollywood. He spoke on the subject "Architecture in the Landscape."

Plans and appointment of special committees to serve during the national convention of the AIA scheduled for Los Angeles, May 15-18, are being made.

OREGON W.A.L.

Four panel discussions entitled "Let's Build a Home" were presented in the Oregonian Hostess House, Portland, early this month, sponsored by the Women's Architectural League and the Hostess House. Mrs. Joseph H. Rudd, Jr., served as chairman, with Mrs. Fred Rudat, Mrs. Stuart Mockford, and Mrs. Thomas Potter assisting.

Participating members of the panel included: Neil Farnham, architect; M. R. L. Smith, real estate loan officer, U.S. National Bank; Ralph Walstrom, property counselor; David Thompson, landscape architect; Julia Keller, interior design; James Barnard, contractor; and John Storrs, architect, moderator.

LOS ANGELES ARCHITECTS WIN NATIONAL HONORS

The Los Angeles architectural firm of A. Quincy Jones and Frederick E. Emmons, AIA, became the first architects in the nation to be honored with five National Association of Home Builders' awards in four consecutive years when citations were given at the organization's recent national convention in Chicago.

Recognition was given for the architects' activities in design of project houses.

PASADENA CHAPTER

The annual Producers' Council-Pasadena Chapter meeting was observed March 13 at Eaton's Santa Anita, with the business program devoted to a panel discussion on the subject "Teaching The Architect How To Sell." Panel speakers included George V. Russell, AIA; Robert Alexander, FAIA; Paul Boyd, sales executive of Union Oil Company; Joe Smythe, sales promotion manager of Philco in Los Angeles. Peter Vogel, vise president of Miracle Adhesive Corpn, was the moderator.

Plans are being completed for presenting an archi-

(See page 32)

WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

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STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

George Bower of the DeLong Corporation and superintendent of construction for the Texas Towers, the "radar islands" being constructed 80 to 200 miles off the New England Coast, was the principal speaker at the March meeting in the Roger Young Auditorium, Los Angeles. He described many interesting phases of this unusual construction project.

The Annual Gridiron Banquet, March 14 at the Palladium, and a dinner party for husbands and wives on March 16, were also interesting activities of the SEASC this month.

New members include: William G. Aspy, Robert T. Topping and Y. N. Yu, JUNIOR; Albert J. Blaylock, ALLIED; Robert W. Blair, Kenneth J. Woodward, Frederick W. Drury, Jr., AFFILIATE; Edwin B. Foster, C. Keith Mason, H. D. McCann, Floyd G. McLellan, Everett E. Ow and Richard J. Tranbarger, ASSOCIATE; and Morris Doberne, Russell T. Connors, C. D. Hoover, Donald K. Jephcott and L. J. Maginess, MEMBERS.

CALIFORNIA COUNCIL CIVIL ENGINEERS AND LAND SURVEYORS

Leo Ruth of San Jose was elected president of the California Council of Civil Engineers and Land Surveyors at the organization's recent fourth annual meeting.

Other officers elected included Jack Y. Long, San Francisco, 1st vice president; Albert W. Daniels, San Diego, 2nd vice president; William A. White, Sacramento, executive secretary.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"Shopping Center Planning" was the subject of March meeting held in the Engineers' Club, San Francisco, with Howard McGurrin, partner in Coldwell, Banker & Company, Realtors and specialists in Development of Regional Shopping Centers; Donald Douglas, Structural Engineer of Los Angeles; and Robert M. Haynie, partner Haas and Haynie, General Contractors, the principal speakers.

McGurrin discussed such planning factors as location, size, tenant requirements and owner requirements.

Douglas discussed structural problems and various methods by which these problems have been solved in recent projects.

Haynie exhibited a motion picture and commented

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section
R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch
Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of Southern California
William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton of Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military Engineers—San Francisco Post
CDR. Paul E. Seufer, President; J. G. Wright, 1st Vice-President; COL. Wm. F. Cassidy, 2nd Vice-President; H. T. Anderson, Secretary; Thomas Hurley, Treasurer. Directors: COL. L. R. Ingram, LT©OL. C. S. Lindsey, E. H. Thouren, CDR. W. J. Valentine, P. Wm. Kohlhaas, BGEN. D. F. Johns, RADM. C. A. Trexel, COL. Paul D. Berrigan, and Larry L. Wise.

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on the construction of the Hillsdale Shopping Center, a $30,000,000 project being built in San Mateo county, and on a number of other projects being constructed by his firm.

New member: Fred W. Crocker.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

"The next 25 Years of Structural Engineering" will be the theme of this year's annual convention, according to an announcement by J. S. Barrish, general convention chairman.

The Central Section will serve as sponsoring Section of the meetings which will celebrate the first 25 years of the Association's activities, and for the first time will be held at Reno, Nevada. Invitations have been issued to the Oregon and Washington Engineers to participate in the technical and social program.

AMERICAN SOCIETY FOR METALS GOLDEN GATE CHAPTER

The Golden Gate Chapter of the American Society for Metals, San Francisco, is sponsoring a 1956 Spring Lecture Series covering four separate lectures to be given one week apart at the Pacific Gas & Electric Auditorium in San Francisco, starting Wednesday, April 4.

"Applications and Limitations of Metals in Service" has been selected as the theme of the lectures with individual discussions including: 1) Chemical and Petroleum; 2) Aircraft; 3) Electronics, and 4) Atomic Energy.

In each field emphasis will be placed on such aspects as the metals and alloys employed, why they are chosen for a given application, what their limitations are, examples of actual failures in service, reasons for such failures, and how such service problems are studied and solved.

Speakers include: John J. B. Rutherford, Chief Metallurgist, Tubular Products Division, Babcock and Wilcox Co., Beaver Falls, Pennsylvania; R. H. Thielemann, manager Metallurgical Section, Stanford Research Institute, Menlo Park; L. W. Kates, Engineering Manager, Sylvania Elteric Products, Inc., Bayside, New York; and Blair R. Elder, Metallurgical Specialist, Commonwealth Edison Project, General Electric Co., San Jose.

(See page 32)

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, John C. Cowley
The Brookman Co., Inc.
2833 Third Street

Vice-President, Philip F. Brown, Jr.
Otis Elevator Company
No. 1 Beach Street

Secretary, Stanley L. Basterash
Western Asbestos Company
678 Townsend Street

Treasurer, John J. O'Connor
H. H. Robertson Company
55 New Montgomery Street

Edited by Robert W. Harrington, **Clay Brick and Tile Association,** 55 New Montgomery Street

John C. Cowley (right), President Producers' Council, Inc., San Francisco, and Clair W. Ditchy, FAIA, Immediate past-president American Institute of Architects, and William Gillett, national president of Producers' Council reviewing details of "Caravan of Quality Building Products and Modular Application."

Architects, builders and contractors who have been busy setting construction records had an opportunity this month to catch up on new products now available for their use. The occasion being a two-day showing in Los Angeles, San Francisco, Portland and Seattle of a $200,000 traveling building materials and equipment exhibition, the Caravan of Quality Building Products and Modular Application.

The exhibition is sponsored by the Producers' Council, Inc., the national organization of building materials manufacturers and their trade associations, and was shown in each city by the Council's local Chapter.

An invited audience of several hundred architects, builders, contractors, dealers, engineers and government officials witnessed the showing and learned of the latest developments now available for their use in new homes and buildings.

Arrangements for the showing in San Francisco were under the direction of John C. Cowley, The Brookman Company, president of the San Francisco chapter, and R. O. Nicolaisen, Johns-Manville Sales Corpn, chapter Caravan chairman.

The Caravan will be shown in Salt Lake City on April 2, and in Denver, April 6.

USE QUALITY PRODUCTS — CONSULT AN ARCHITECT

WESTERN RED CEDAR IN RESEARCH PROGRAM

The Western Red Cedar Lumber Association has announced a research program will be carried out during 1956 for the purpose of determining the best methods of application and surfacing of Western Red Cedar Siding, according to Frank Pendleton, chairman of the Association's Research Committee.

The program will be directed by Clark C. Heritage of Tacoma Washington, until recently development director of the Weyerhaeuser Timber Company. It will be conducted with the cooperation of several laboratories and educational institutions, the first objective being to develop techniques for the application of Western Red Cedar siding at minimum cost. Another phase calls for a factual comparison of the performance of WRCS with other types of siding.

JOHN BRENNER EXPANDS ARCHITECTURAL OFFICE

The A. John Brenner and Associates, AIA, Architects of Phoenix, Arizona, recently announced the expansion of the firm with formation of a new partnership, to operate under the same name, by the addition of E. W. McIntire as a partner.

Offices of the architectural firm are located at 702 Title & Trust Bldg., Phoenix.

JOHN M. HALEY APPOINTED STATE HYDRAULIC ENGINEER

John M. Haley, Sacramento, has been named Principal Hydraulic Engineer in the Division of Water Resources for the State of California, according to a recent announcement by State Engineer Harvey O. Banks.

Haley will be in charge of the statewide Water Resources Investigation and other work for the Water Resources Board, which includes all activities in connection with planning for the ful conservation, control, and utilization of the water resources of the State for all beneficial purposes. The Board's responsibilities also include water resources investigations made in cooperation with the Federal government.

Haley replaces William L. Berry, who has been promoted to the position of Assistant State Engineer.

VALLEY CONSULTING ENGINEERS MEET

The Consulting Engineers Association of California, comprising a membership of consulting engineers in private practice from all branches of engineering—chemical, civil, electrical, mechanical, petroleum, and structural—held their third annual meeting in Fresno recently.

LOS ANGELES ARCHITECT AND ENGINEER ON ROAD

The Los Angeles architectural and engineering firm of Benedict, Beckler & Associates are to handle the testing and inspection of a 94-mile stretch of the new Kansas high-speed, limited access highway which will run from Kansas City through Topeka and Wichita, then south to the Oklahoma border.

The new Kansas Turnpike will cost a total of $165,000,000 and plans call for the placing of 701 tons of asphalt-concrete paving material.

A. H. Benedict, who will open offices in Wichita and supervise the work, won national recognition for his work on flexible pavements while serving as a member of the U.S. Army Engineers board of consultants. He was also a special consultant to the New Jersey Turnpike Authority on the design of its $12,000,000 model highway.

MOTOR VEHICLE BUILDING

The California State Motor Vehicle Department is completing review of plans and specifications prepared by architect Donald M. Shaw, AIA, of Walnut Creek for construction of a 1-story concrete block Motor Vehicle Building in the City of Walnut Creek.

Construction will include a steel roof deck asphalt tile floors, aluminum sash, and 2400 sq. ft. of area.

SHOPPING CENTER

Architect Warren Wong, AIA of Stockton, is preparing drawings for construction of a $1,000,000 Shopping Center to be constructed in Merced.

Construction will comprise a 1-story supermarket and group of stores, 127,000 sq. ft. of area: buildings of concrete block and wood roof.

PAPER CONTAINER SITE PURCHASED

The International Paper Company of New York City has acquired a site in Turlock, California, where they will soon start construction of a 63,000 sq. ft. plant for the manufacture of paper milk containers.

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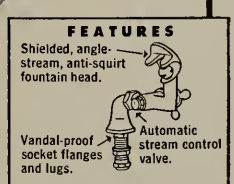
FEATURES



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A.I.A. ACTIVITIES

(From page 27)

tectural exhibit during the 88th Annual AIA Convention which will be held in Los Angeles this year.

New members include: Glenn C. Lareau, Walter D. Domingos, Jr., and Wilbert Ross Kimberly.

EAST BAY CHAPTER

The East Bay Chapter recently announced offices had been opened in the Hotel Claremont, Mezzanine floor, where office hours are maintained daily from 9 am to 1 pm.

COAST VALLEYS CHAPTERS

A recent meeting devoted to an "Architectural Symposium" proved to be one of the most interesting meetings of the year. Arrangements have been completed for several exhibits to be shown in the Chapter office. Several photographic panels are on display illustrating outstanding examples of architecture in the area.

ARCHITECT APPOINTED PROFESSOR AT MIT

Eduardo Fernando Catalano, Argentine architect, has been appointed Professor of Architecture at the Massachusetts Institute of Technology, according to a recent announcement by Dean Pietro Belluschi of the School of Architecture and Planning. He will join the staff for the fall term 1956.

Catalano has had an active career as practicing architect in Buenos Aires and as a teacher of architecture in this country and Argentina. He is now acting head of the Department of Architecture in the School of Design at the North Carolina State College.

PRODUCERS COUNCIL OPENS NEW NATIONAL OFFICES

The Producers' Council, Inc., recently announced opening of their new national headquarters at 2029 K Street, NW, Washington, D.C.

The organization represents the manufacturers and distributors of building products, and in addition to maintaining headquarters in the nation's Capitol city, local Chapters are organized throughout the country.

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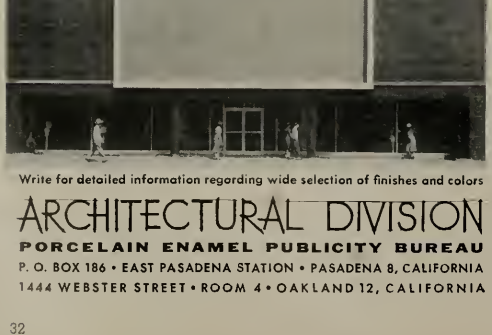

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ENGINEERS

(From page 29)

AMERICAN SOCIETY OF CIVIL ENGINEERS LOS ANGELES SECTION

The Feather River Project, as the initial unit of the California Water Plan which will involve exportation of water to areas of deficient supply, will be the subject of a program to be presented April 4, before the Hydraulics Group in Room 2, State Division of Highways Building, Los Angeles.

"The Counties of Origin" and "Watershed Protection" Statutes and the State Water Plan will be discussed by Charles C. Cooper, Jr., Assistant General Counsel, The Metropolitan Water District of Southern California.

The legal and political problems inherent in the conflicts of interest, no less than the engineering, economic, and financial aspects, must be resolved before the project can become a reality.

AMERICAN SOCIETY OF HEATING & AIR CONDITIONING ENGINEERS

The Golden Gate Chapter, San Francisco, held their March meeting at the Burgermeister Brewery where a tour of the property was made, a smorgasbord supper was served, and the regular business meeting held.

AMERICAN SOCIETY CIVIL ENGINEERS PACIFIC SOUTHWEST COUNCIL

A four day business and social conference has been scheduled for April 19-22, at the Huntington Sheraton Hotel in Pasadena.

Included in technical discussions is a consideration of "Legislation Affecting Engineers," "Highway Engineering Computations by Electronic Computers," "Local Sections and the Joint Council," "What Does the Engineer Want," "Water Rights and the Proposed State Water Plan," "Problems of the Arid West," "Control of Floods from Torrential Storms," and "Is Registration of Civil Engineers a Technical

and Professional Asset?" Field trips will include the Long Beach Harbor and special trips have been arranged for the ladies, including a trip to the Huntington Library and Art Gallery and Disneyland.

ILLUMINATING ENGINEERING SOCIETY PACIFIC COAST REGIONAL CONFERENCE

Commemorating 50 years of lighting progress, the Golden Anniversary Regional Conference of the Illuminating Engineering Society will be held in San Francisco, April 11-13, at the Hotel Mark Hopkins.

Sessions will be devoted to outdoor and architectural floodlighting, residential lighting, industrial lighting and store lighting. The residential lighting session will feature a panel of speakers and talks on lighting design for residences and garden lighting. Newest light fixtures for the home will be demonstrated.

Invitations have been issued by the Golden Gate Section to architects, consulting engineers, electrical engineers, builders, manufacturers, office managers, store owners, interior decorators and residential users, to attend the sessions.

SAM B. DIXON ARCHITECT JOINS HOUSTON FIRM.

Sam B. Dixon, Houston architect, has joined the architectural firm of Roy W. Leibsle in Houston. The name of the firm has been changed to Roy W. Leibsle and Associates.

Col. Leibsle supervised construction of the Ellington AFG near Houston, and as an associate of Joseph Finger, Inc, was active in design of the Houston City Hall.

Dixon is a graduate of the Texas A&M (1943) in Architectural engineering and served in the Corps of Engineers overseas during World War II.

AMERICAN STANDARDS ASSOCIATION ISSUES ANNUAL REPORT

The annual report of the American Standards Association issued recently by Vice Admiral George F. Hussey, Jr., managing director, marked last year as the "biggest year for standards" in the history of the 37-year-old organization.

The association approved a total of 238 American Standards from January 1955 to January 1956. This contrasted with 153 American Standards approved in the previous year.

There are now 388 projects for Standards being carried on under ASA auspices, Admiral Hussey reported.

PHOTO CREDITS: *Gordon Sommers, Page 6; Moulin Studio, Page 7; Barry Evans, Cover and Page 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19; Information Branch, Dept. of Trade and Commerce, Ottawa, Page 20, 21, 22; U.S. Steel Corpn. Page 25.*

FRANK J. ROONEY ELECTED PRESIDENT OF ASSOCIATED GENERAL CONTRACTORS

Frank J. Rooney, building contractor of Miami, Florida, was elected 1956 president of the Associated General Contractors of America at the organization's 37th annual convention in New York City. He succeeds George C. Koss of Des Moines, Iowa, a highway paving contractor.

Other officers named to serve with Rooney during the new year included: Lester C. Rogers, heavy construction engineer of Chicago, vice-president; and Regional Directors G. B. Seebeck, The Green Co., Spokane, Washington; J. A. Woodworth, Woodworth and Co., Inc., Tacoma, Washington; Frank F. Burrows, Williams and Burrows, Inc., Belmont; William E. Irish, E. A. Irish, Los Angeles, California; Keppel Brierly, J. K. Construction Co., Denver, Colorado; J. Rutledge Hill, Gifford-Hill & Co., Dallas, Texas; I. G. Homes, Homes & Son Construction Co., Phoenix, Arizona; and new officers for occupational divisions included:

Highway Contractors Division: Edward O. Earl, San Xavier Rock & Sand Co., Tucson, Arizona, chairman; and Ray Rogers, Rogers & Rogers Construction Co., Portland, Oregon, vice-chairman.

INTERNATIONAL COMPETITION

(From page 25)

Finnish architect and a graduate of the School of Architecture at Yale University. His designs have won a number of competitions, including a concert hall and theatre at Vancouver, Canada; the Kleinhans Music Hall in Buffalo, New York; and a theatre at the Massachusetts Institute of Technology in Boston, U.S.A.

Mr. Saarinen has also made one of the greatest contributions to contemporary industrial architecture with his scheme for the General Motors Technical Center near Detroit.

In announcing the acceptance of these two overseas architects to join the panel, the Premier of New South Wales, Mr. J. J. Cahill, said that the Opera House Committee had in view the need for judges, not only with a specialized knowledge of theatre and concert-hall design, but also men young enough to be sympathetic with the new ideas and concepts of their day.

"I feel the Committee has reason to be proud of having added to their panel the names of two men with such world-wide reputations," he added.

Sir Eugene Goossens, director of the Sydney Symphony Orchestra, and Mr. Hugh Hunt, executive officer of the Australian Elizabethan Theatre Trust, will advise the assessors on the functional aspects of the design.

ST. LAWRENCE SEAWAY

(From page 24)

Thus, navigation proceeding upstream will enter the Grass River Lock on the American side, transit the Long Sault Canal and enter the power pool at the Robinson Bay Lock. It will proceed by the indicated channel to the Iroquois lock on the Canadian side and by that lock and its canal be lifted to the water level of the Thousand Islands Section and proceed by dredged channels into Lake Ontario.

It is in the heart of this International Rapids Section, namely at Cornwall, Ontario, that will be erected the future headquarters of The St. Lawrence Seaway Authority.

Scheduled to be in use for the opening of navigation in the spring of 1959, the Seaway will become a major achievement in the history of both Canadian and International transportation. The St. Lawrence Seaway Authority, in conjunction with its counterpart, the Saint Lawrence Seaway Development Corporation, will soon bring this long awaited dream to realization.

This dream could never have been realized without the cooperation of the United State Government. Its agency, the Saint Lawrence Seaway Development Corporation, is working in complete harmony with The St. Lawrence Seaway Authority in the carrying out of the works in the International Rapids Section. This is an example of international cooperation of which Canada can well be proud.

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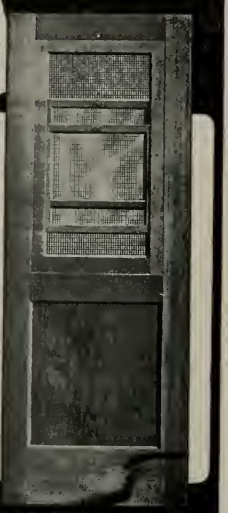

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(From page 8)

ville; James H. Landis, San Mateo, vice-president, Bechtel Corp., San Francisco; Charles R. Nelson, Orinda, head of the Process Engineering Department, Shell Development Co., Emeryville; Dr. Bernard M. Oliver, Palo Alto, Director of Research, Hewlett-Packard Co., Palo Alto; D. J. Pompeo, Oakland, Department Head, Instrumentation Department, Shell Development Co., Emeryville; G. Metcalf Simonson, Piedmont, consulting electrical and mechanical engineer, San Francisco; and Edwin L. Slagle, Pittsburg, Works Industrial Engineer, Pittsburg Works, Columbia-Geneva Steel Division, U.S. Steel Corp.

Featured speaker of the Awards Luncheon was Dr. William Shockley, director of the newly established Shockley Semiconductor Laboratory of Beckman Instruments, Inc., Palo Alto, who traced the history of modern-day electronics "From the Carbon Microphone to the Nuclear Reactor."

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

PROCESSING CHANGE ORDERS AND DISPUTES. Associated General Contractors of America, Munsey Bldg, Washington 4, D. C. Price $.20.

A booklet containing schedules to which the three principal government construction awarding agencies have agreed for the processing of change orders and disputes, in accordance with standard contract provisions that set forth the conditions and time limitations within which contractors must comply with change orders and perform actions incident to filing claims, appeals and answers to decisions of contracting officers of the agencies. Brief introduction is included together with letters of explanation.

THE FLOOD AND NOAH'S ARK. By Andre' Parrot. Philosophical Library, Inc., 15 E. 40th St., New York 16, N. Y. Price $2.75.

In this first volume of the Studies in Biblical Archeology M. Andre' Parrot, the distinguished French archeologist, Curator-in-Chief of the French National Museums, Professor at the School of the Louvre, and Director of the Mari Archeological Expedition, sets out the biblical and Babylonian accounts of the Great Flood. The author gives an account of the non-biblical stories and discusses their various sources. Translation by Edwin Hudson.

THE TOWER OF BABEL. By Andre' Parrot. Philosophical Library, Inc., 15 E. 40th St., New York 16, N. Y. Price $2.75.

The author, Curator-in-chief of the French National Museums, Professor at the School of the Louvre and Director of the Mari Archeological Expedition, writes of the "ziggurats, the high edifices whose remains have been discovered in Mesopotamia, and relates how the archeological evidence reveals the 'brick for stone' and the 'slime for mortar' mentioned in Genesis II.

Parrot views the purpose of the "zigguart" was to be a bond of union to assure communication between earth and heaven. He also discusses the manner in which the Tower of Babel has been depicted in Christian art. The book has been translated by Edwin Hudson.

ASTM STANDARDS ON CEMENT (With Related Information). American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Price $2.75.

This compilation represents in convenient form (6x9, 273 pp) the various ASTM standards and tentative specifications, methods of chemical analysis, and methods of physical testing pertaining to cement. Of the total of 37 specifications and tests recommended in 1954, 18 have been revised and 5 are new. Two methods published in a previous edition have been discontinued and incorporated in new bulletins. Standards in this book have been formulated by ASTM Committee C-1 on Cement and are of great value to all concerned in the manufacture and use of cement.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

"Guide to better paint specifications." Descriptive brochure (A.I.A. File No. 25) gives facts, figures, and fine points about paints—developed for architects, engineers, designers, and contractors, the manual covers the most frequently used paint products, their functions, and application techniques; divided into 5 sections—1) Specifications Chart, 2) General information about painting contracts, insurance, etc., 3) Painting specifications, 4) Description of products, and 5) Color specifications. Free copy, write DEPT-A&E, Martin-Senour Co., 2500 S. Senour Ave., Chicago, Ill.

Movable metal walls for space control. 68-page workbook (A.I.A. File 35-H-6) of detailed information on flexible interiors for offices, factories, schools, hospitals, and buildings of every type; more than 50 photographs of typical installations, including full-color cover photo; complete information on design and construction features, specifications and detail

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drawings, meeting all requirements of a practical work-book for planning interiors which provide constant efficiency in use of space. Write DEPT-A&E, Mills Company, 968 Wayside Road, Cleveland 10, Ohio.

Painting Guide for Sewage Plants and Water Works. New 28-page engineers guide is easy reference manual for writing specifications; specifications are in handy chart form as well as standard form: indexed from specifications to product recommendation—time saving guide provides information on mil thickness, coverage, required number of coats, etc., for each of the coatings; also information on surface preparation, application. For copy, write DEPT-A&E, Inertol Co., Inc., 27 So. Park, San Francisco 7, Calif.

Cork tile flooring. New 1956 catalog (A.I.A. File No. 23G) on Vinyl-Cork Tile and Standard Cork Tile flooring; full color illustrations including several exclusive cork specialty designs; Design data, short-form architects' specifications, installation instructions and care and maintenance information are included. Also table showing various characteristics of Vinyl-Cork tile based on exhaustive independent laboratory tests. Copies available, write DEPT-A&E, Dodge Cork Co., Inc., Lancaster, Pa.

Building Specialties Catalog. New 60-page, 3-color catalog includes full description and illustration of popular M-D weather strips, calking and glazing compounds, moulding and trim, screen door grilles, thresholds, numbers and letters, binding and edging, sliding door hardware and aluminum levels; alphabetically indexed for quick, easy reference; each product thoroughly described and illustrated as to its use, size, finish, packaging, and shipping. Write for copy, DEPT-A&E, Macklanburg-Duncan Co., Box 1197, Oklahoma City, Okla.

Bronze valves for oil industry. New 12-page, 2-color catalog lists data on over 150 valves; 59 illustrations, easy to read specifications and data; sizes and applications for each valve given in chart form. Write for copy, DEPT-A&E, Milwaukee Valve Co., 2375 So. Burrell St., Milwaukee 7, Wisconsin.

How to select and specify cold storage doors. A 20-page booklet helps architects, contractors and refrigeration engineers select and specify cold storage doors for all purposes; recommendations for every standard operating purpose; discussion includes temperatures, insulation, type of door swing and sill construction; problems of moisture in various forms; 11 styles of doors are illustrated and described in relation to use; typical specifications for main door types; check list of operating conditions. Free copy write DEPT-A&E, Jamison Cold Storage Door Co., Hagerstown, Md.

Presdwood Products—a Guide for Architects. 1956 edition printed in color and profusely illustrated with drawings and photos; 20-page guide contains tables showing properties, available sizes, descriptions of various hardboard types, directions for working with, application details and architectural specifications. Free copy write DEPT-A&E, Service Bureau, Masonite Corp., 111 W. Washington St., Chicago 2, Ill.

Specifications for Metal Lathing and Furring. The 1956 edition prepared by the Metal Lath Manufacturers Association, now ready for distribution; covers all types of metal lath construction; includes specifications for solid and hollow partitions; wall furring; metal lath attached directly to wood supports; contact, furred and suspended ceilings; beam and column protection for fireproofing; and reinforcing for exterior stucco; fire resistive ratings and descriptions of construction; tables denoting various spans and spacings for supporting metal lath and plaster ceilings have been rearranged to facilitate use. Free copy, write DEPT-A&E, Metal Lath Mfgr's Ass'n, Engineers Building, Cleveland 14, Ohio.

Control consoles. New line of control consoles for Central Sound Distributing Systems, described in 6-page catalog; written in non-technical terms; complete application information; describes basic functions of Single Channel Sound Control Console; illustrated; technical specifications and dimension drawing included. Write DEPT-A&E, Radio Corpn. America, Building 15-1, Camden, New Jersey.

Engineered fire protection. New, illustrated catalog, covers the various generally accepted methods of fire detection, fire prevention, fire control, fire extinguishment; and also special hazard fire protection. Copy available free, write DEPT-A&E, Automatic Sprinkler Corpn of America, Youngstown, Ohio.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 per bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White—1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	---	.64

Aggregates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ¼-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390.00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grade	375.00
33/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00
Floor Layer Wage $2.83 per hr.	

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.62 per □ ft.
¼ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3¾") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
⅜-inch, 4.0x8.0-SIS 200.00
¼-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Wholesale Raw	Wholesale Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, B-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12', $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile
Scored ..... F.O.B. S. F.
12 x 12, each ..... $ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x 7/8-inch, plain	$ .28	$ .253
6 x 12 x 7/8-inch, plain	.295	.265
6 x 6 x 7/8-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.65
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles SB: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE B494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*3B)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*3B)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR B393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR B2B2
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-01BB
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(96)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(115)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Coste	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	[A]3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	[B]2.86	[B]2.86	[C]2.835	[C]2.86	[D]2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	[E]2.785	[E]2.785	[E]2.785	[E]2.785	[E]2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	[F]2.61	[F]2.61	[F]2.61	[F]2.61	[F]2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		[G]3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	[H]2.16	[H]2.16	[H]2.16	[H]2.16	[H]2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	[I]3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	[J]3.18	[J]3.18	[J]3.18	[J]3.18	[J]3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	[K]3.075	3.075	3.075	[L]3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	[M]2.77	[M]2.77	[M]2.77	[M]2.77	[M]2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	[N]2.265	[N]2.265	[N]2.265	[N]2.265	[N]2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

[A] $3.55 effective Sept. 1, 1955
[B] $2.90 effective Sept. 15, 1955
[C] $2.90 effective Oct. 15, 1955
[D] $2.95 effective Sept. 15, 1955
[E] $2.825 effective Sept. 15, 1955
[F] $2.65 effective Oct. 31, 1955
[G] $3.20 effective Nov. 1, 1955
[H] $2.20 effective Sept. 15, 1955
[I] This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
[J] $3.24 effective Oct. 31, 1955
[K] $3.15 effective Sept. 1, 1955
[L] $3.125 effective Nov. 1, 1955
[M] $2.86 effective Oct. 31, 1955
[N] $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Coste	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcAOM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB 12½cv; 10cP	10cw 12½cv	10cw 1½cA	10cw 10cP; IcA	10cw 12½cv	10cw 10cP; IcA	10cw	10cw IcA			10cw	10cw	10cw
ROOFER	7½cw 7½cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw	7½cw 5cv	7½cw	8½cw	10cv		8½cw 10cv	7½cw 10cv
SHEET METAL WORKER	7½cw	7½cw 3¼cv	7½cw 3¼cv	7½cw 2%v	7½cw	7½cw	7½cw 7½cv	7½cw 4%v	8½cw 6½cv	8½cw 6½cv	8½cw	8½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP 12½cv; 2½cJIB	10cw IcA	10cw IcA	10cw 10cP; IcA	10cw 12½cv	10cw 10cP; IcA	10cw	10cw IcA			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%PROM				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

EXPOSITION BLDG, Fairgrounds, Vallejo, Solano county. County of Solano, Fairfield, owner. Tilt-up concrete precast construction, wood roof; 105x200 ft. of area — $153,850. ARCHITECT: Jack Buchter & Associates, Vallejo. GENERAL CONTRACTOR: Elmer J. Freethy, El Cerrito.

GRANDSTAND, Fairgrounds, Red Bluff, Tehama county. State of California, Sacramento, owner. Work comprises designing, furnishing and erecting grandstand to accommodate 2500 persons; structural steel frame, concrete, sheet metal roof and siding back of grandstand seats; wood seats, aisles and stairways, railings; grading, painting — $68,000. ARCHITECT: Division of Architecture, State of California, Sacramento. GENERAL CONTRACTOR: Fred D. Corbett, North Sacramento.

SWIMMING POOL, High School, Puente, Los Angeles county. Puente Union High School District, Puente, owner. New swimming pool, excavating, concrete, gunite, masonry, structural steel, sheet metal, roofing, glass and glazing, steel sash, ceramic tile, hollow tile, hollow metal doors and frames, hardware, pool equipment, painting, paving, plumbing, electrical and fencing — $69,720. ENGINEER: Bowen, Rule & Bowen, Los Angeles. GENERAL CONTRACTOR: Daken Engineering Co, Alhambra.

CHURCH & PARISH HALL, St. Sebastian Parish, Greenbrae, Marin county. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 2-Story frame and stucco construction, tile roof—$165,000. ARCHITECT: Ryan & Lee, San Francisco. GENERAL CONTRACTOR: Ray I. Johnson, Kentfield.

MOTEL UNITS, Anaheim, Orange county. Motel of the Stars, Corpn, Anaheim, owner. Work comprises a restaurant and 300 units of a contemplated 1200 unit motel; five buildings, 2-story, frame and stucco and masonry, composition built-up roofing, concrete, plywood, carpeting and linoleum floors, air conditioning, aluminum sash, sliding glass doors, ornamental iron work, ceramic tile stall showers and tub showers, 25-meter swimming pool; restaurant 22,000 sq. ft. of area, 2-cocktail lounges, 3-dining rooms, coffee shop, reinforced concrete construction, composition roofing, 2-kitchens, fireplace. ENGINEER: Leslie L. Penn, Structural Engineer, Newport Beach. GENERAL CONTRACTOR: John C. Borlase Constn Co, Los Angeles.

NEW HIGH SCHOOL, Sierra Junior High, Riverside. Riverside City Schools District, owner. Work includes 9-classrooms, home economics department, administrative unit, library, multi-purpose unit, cafeteria, music and shop units; reinforced brick construction, grading, structural steel, built-up roof, metal sash, slab and asphalt tile floors, plastering, metal doors and frames, insulation, acoustical, metal toilet stalls, electrical, plumbing, sheet metal. ARCHITECT: Herman O. Ruhnau, Riverside. GENERAL CONTRACTOR: Hoefer Constn Co, Fontana.

MANZANITA HALL (Remodel), University of Nevada, Reno. State of Nevada, Carson City, owner. Remodel interior of present Manzanita Hall at the University of Nevada campus at Reno—$195,858. ARCHITECT: De Longchamps & O'Brien, Reno. GENERAL CONTRACTOR: W. H. Wine Constn Co., Reno.

SUPER MARKET, Willows, Glenn county. San-Food Market, Willows, owner. 1-Story concrete block, long span steel joists, web joists, concrete floor, wood roof, aluminum skylights, plate glass front, air conditioning; 10,000 sq. ft. of area—$87,329. ARCHITECT: Jee & Anderson, Berkeley. GENERAL CONTRACTOR: Jake Funk, Orland.

LATEX PLANT, Pittsburg, Contra Costa county. Dow Chemical Company, Pittsburg, owner. New synethetic Latex Plant to cost over $1,000,000. GENERAL CONTRACTOR: Swinerton & Walberg, San Francisco.

MANUFACTURING BLDG, Los Angeles. Charles Lyon Hollywood Clothing Company, Los Angeles, owner. Concrete construction 62x235 ft. of area; composition and gravel roof, hardwood, carpet, masti-pave, asphalt tile and ceramic tile floors; terrazzo entrance, interior plaster work, acoustic tile ceilings, forced air heating, gas water heater, metal toilet partitions, electric drinking fountains, mezzanine, insulation, automatic sprinkler system, galvanized iron downspouts, tapered steel beams, pipe columns, pre-cast concrete tilt-up wall panels, asphaltic-concrete paving, aluminum overhead doors, steel sash—$130,000. ENGINEER: Donald R. Warren Co., Los Angeles. GENERAL CONTRACTOR: Chotiner & Gumbiner, Los Angeles.

HOTEL ADD'N, Long Beach. Lafayette Hotel Company, Long Beach, owner. 2-story frame and stucco addition; 51 rooms; concrete slab, carpeting and ceramic tile, composition gravel roofing, interior plaster, ceramic tile tub showers and stall showers, fixed and jalousy sash, plate glass, electric wall heaters, steel stair rails, swimming pool; 7,000 sq. ft. of area—$125,000. ARCHITECT: Kilingsworth, Brady & Smith, Long Beach. GENERAL CONTRACTOR: J. E. Simkins, Long Beach.

BANK & OFFICE, Hanford, Kings County. Anglo California National Bank, San Francisco, owner. 1-story, mezzanine; reinforced concrete and light steel construction; air conditioning; 10,000 sq. ft. area — $185,372. GENERAL CONTRACTOR: Harris Const. Co., Fresno.

TELEPHONE BLDG., Salinas, Monterey County. Pacific Telephone & Telegraph Co., San Francisco, owner. 1 story frame and stucco, telephone service building—$140,000. ARCHITECT: Butner, Holm & Waterman, Salinas. GENERAL CONTRACTOR: Alfred H. Juncker, Salinas.

STORE, Fontana, Los Angeles County. Joe Rupar, Fontana, owner. 1-story concrete block store building; 3000 sq. ft. area. ARCHITECT: Stanley C. Meston, AIA, Fontana. GENERAL CONTRACTOR: Hoefer Construction Co., Fontana.

AUDITORIUM, Flintridge, Los Angeles County. Flintridge Academy of the Sacred Heart, Pasadena, owner. Frame and stucco construction, glued laminated beams, mission tile and composition roofing, hardwood and asphalt tile floors, steel sash, acoustical work, toilet facilities with ceramic tile work and diato work, forced air heating; 10,000 sq. ft. of area. ARCHITECT: George Adams, AIA, Los Angeles. GENERAL CONTRACTOR: Alex Sutherland, Monrovia.

MEAT PACKING PLANT ADD'N, Long Beach. Griffith Meat Company, Long Beach, owner. Brick and masonry addition, concrete slab, composition mopped roofing on 1-in. diagonal sheathing, wood rafters, concrete loading dock; 2500 sq. ft. area—$20,000. ENGINEER: W. G. Chandler, Los Angeles. GENERAL CONTRACTOR: E. D. Morse, Long Beach.

PICKLE BLDG., Tracy, San Joaquin County. H. J. Heinz Company, Tracy, owner. 1-story reinforced concrete, grouted brick and brick veneer, structural steel frame; 83 x 262 ft. area. ARCHITECT: Skidmore, Owings & Merrill, San Francisco. GENERAL CONTRACTOR: J. H. Pomeroy Co., San Francisco.

COUNTY HOSPITAL ADD'N, Yreka, Siskiyou County. County of Siskiyou, Yreka, owner. 1-story reinforced concrete and frame construction — $98,860. ARCHITECT: Robert J. Keeney, AIA, Medford, Oregon. GENERAL CONTRACTOR: A. P. Giordano, Yreka.

INDUSTRIAL BLDG., West Los Angeles. Morton Harris, West Los Angeles, owner. Reinforced brick, laminated wood trusses, composition roof, concrete slab and asphalt tile floors, plumbing, electrical, steel sash, wood sectional doors, asphaltic paving; 12,000 sq. ft. area. STRUCTURAL ENGINEER: Paul J. Toien, Los Angeles. GENERAL CONTRACTOR: John Beck, West Los Angeles.

SHOPPING CENTER, La Mirada. Harold L. and Martha J. Shaw, Los Angeles, owner. Reinforced brick masonry and stone veneer shopping center consisting of 2 1-story store buildings and a 4-story office building with basement; concrete

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slab, terrazzo, plywood, ceramic tile and asphalt tile floors, steel truss roof, composition rock roofing, exposed masonry, plaster and gypsum interior, acoustical tile, plate glass in aluminum framing and aluminum projection sash, ceramic tile rest rooms, forced air heating and air conditioning, metal toilet partitions, fire sprinklers; 53,600 sq. ft. of floor area—$325,000. ARCHITECT: Faxon, Gruys & Sayler, Architect and Engineers, Beverly Hills. GENERAL CONTRACTOR: Shaw Const. Co., La Mirada.

FAIR BLDG., 21st District Agricultural Association, Fresno. State of California, Division of Public Works, owner. 1-story wood frame, stucco exterior, some brick, steel sash, exterior metal doors, concrete floor slabs on gravel, wood shake roof, interior wood studs, plaster and wood paneling, acoustic tile ceilings, asphalt tile floors, electrical; 42 x 119 ft. area—$65,300. ARCHITECT: State Architect, Sacramento. GENERAL CONTRACTOR: L. B. Pipes, Fresno.

TELEPHONE EXCHANGE, Mt. View, Santa Clara County. Pacific Telephone & Telegraph Company, San Francisco, owner. 2-story reinforced concrete construction; 55 x 36 ft. area and 29 x 72 ft. area. ARCHITECT: Clarence O. Peterson, AIA, San Francisco. GENERAL CONTRACTOR: Carl N. Swenson Co., San Jose.

CARPENTERS UNION HALL, Pomona, Los Angeles county. United Brotherhood of Carpenters & Joiners of America, Local No. 1752, Pomona, owner. Cement block walls, composition roofing, steel sash, plate glass and aluminum front, concrete vault, slab and vinyl floor, metal toilet partitions, ceramic tile work, acoustical work, metal clad doors, ventilating fans, cabinet work; 3200 sq. ft. area. ARCHITECT: Roy A. Kazebier, AIA, Ontario. GENERAL CONTRACTOR: Berry & Paul, Ontario.

LUTHERAN CHURCH, St. Stephens, Long Beach. St. Stephens Lutheran Church, Long Beach, owner. Frame and stucco addition of 1800 sq. ft., composition roof, slab floors, sliding and casement sash, interior plaster, folding doors, electrical heating. ARCHITECT: Kenneth S. Wing, AIA, Long Beach. GENERAL CONTRACTOR: O. L. Dahl, Long Beach.

APARTMENT, 2-Buildings, Palo Alto, Santa Clara county. Dr. Rex Saegesser, Palo Alto, owner. 2-Story frame and wood exterior, steel sash—$200,000. ARCHITECT: Morgan Stedman & R. E. Williams, Palo Alto. GENERAL CONTRACTOR: Wells P. Goodenough, Palo Alto.

HIGH SCHOOL, Addition. Turlock, Stanislaus County. Turlock Joint Union High School District, Turlock, owner. Comprises 6 classrooms, library building; grouted brick, reinforced masonry and structural steel; 12,000 sq. ft. of area—$264,900. ARCHITECT: Mayo, Johnson & De Wolf, Stockton. GENERAL CONTRACTOR: Larsen-Ratto, Fresno.

BOWLING ALLEY, Fallon, Nevada. U.S. Navy, District Public Works Officer, San Bruno, California, owner. Consists of erection of a government furnished Butler type building, 40 x 100, to be used as a bowling alley at the U.S. Navy Auxiliary Air Station—$16,800. GENERAL CONTRACTOR: McDonald Bros., Los Angeles.

THERAPY CENTER, Concord, Contra Costa County. Mt. Diablo Therapy Center, Martinez, owner. 1-story frame and stucco construction; wood exterior, some structural steel, steel sash, concrete floors, radiant heating; 9,000 sq. ft. floor area—$141,398. ARCHITECT: Harry Y. Nakahara, Martinez. GENERAL CONTRACTOR: Romley Const. Co., Walnut Creek.

OFFICE-STORE ADD'N. Los Angeles. Belousoff Investment Co., Beverly Hills, owner. 3-story brick addition; composition roofing, concrete floor, asphalt tile and cement tile, painting, plastering, plumbing, electrical work, acoustical tile, air conditioning, gas water heaters, metal toilet partitions, elevator and dumb waiter, mezzanine, skylights, insulation, stone veneer, concrete paving; 102 x 50 ft. area. ARCHITECT: Armet & Davis, Los Angeles. GENERAL CONTRACTOR: Robert Ryan Const. Co., Los Angeles.

CENTRAL BANK Remodel, Fresno. State Central Bank, Fresno, owner. Remodel of exterior, interior and mezzanine—$39,995. ARCHITECT: Wm. Hastrup, AIA, Fresno. GENERAL CONTRACTOR: W. E. Holt, Fresno.

JUNIOR HIGH ADD'N, Mansfield School, Tucson, Arizona. Pima County Board of Supervisors, Tucson, owner. Comprising the construction of additions and alterations to the Mansfield Junior High School — $110,690. ARCHITECT: Russell Hastings, Tucson. GENERAL CONTRACTOR: Marian L. Abplanalp, Tucson.

CHURCH, Van Nuys, Los Angeles County. San Fernando Congregation of Jehovah's Witnesses, San Fernando, owner. Composition roof, concrete and asphalt tile floors, interior plaster work, forced air heating, toilets, drinking fountain, tapered steel girders, pipe columns, stone planter boxes, asphaltic concrete paving, double hung wood sash; 40 x 70 ft. area — $22,000. ARCHITECT: E. Vanden Hoven, Hawthorne. GENERAL CONTRACTOR: A. Walter Ferguson, Gardena.

WAREHOUSE, Newark, Alameda County. Jones-Hamilton Co., San Francisco, owner. 1-story reinforced concrete tilt-up construction; wood roof and wood roof trusses; some structural steel, concrete floors; 25,000 sq. ft. area. ARCHITECT: Blanchard & Maher, San Francisco. GENERAL CONTRACTOR: B. M. Lee, Lafayette.

MAUSOLEUM ADD'N, Inglewood, Los Angeles county. Inglewood Cemetery, Inglewood, owner. 1-story addition, composition roofing, concrete, bronze, copper skylights, marble work, electrical, plumbing; 80x60 feet area. ARCHITECT: Walter E. Erkes, Los Angeles. GENERAL CONTRACTOR: Gunn Constn Co, Los Angeles.

CAFETERIA, Stockton, San Joaquin county. California Walnut Growers Association, Los Angeles, owner. 2-Buildings: Administration building of 19,500 sq. ft. of area and Cafeteria of 7,000 sq. ft. in area; reinforced concrete tilt-up construction, wood roof—$400,000. ARCHITECT: John W. Bomberger, AIA, Modesto. GENERAL CONTRACTOR: Utah Constn Co, San Francisco.

BANK, Northridge, Los Angeles county. Bank of Northridge, owner. Frame, stucco and masonry veneer bank building, composition roof, wood sheathing, concrete slab, resilient floor, plate glass, vault, stone veneer, heating, ventilating, mezzanine, toilet facilities; 60x100 ft. area. ARCHITECT: J. R. Harris, AIA, Studio City. GENERAL CONTRACTOR: Russ Ketchum & Sons, Inc, Van Nuys.

DANCE STUDIO, Sacramento. Arthur Murray Dance Studio, Sacramento, owner. Remodel of building to include interior and construction of a new front. ARCHITECT: Rickey & Brooks, Sacramento. GENERAL CONTRACTOR: Sacramento Constn Co, Sacramento.

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IN THE NEWS

AMERICAN STANDARDS ASSOCIATION ELECTS

H. Thomas Hallowell, Jr., president of the Standard Pressed Steel Company, Jenkintown, Pa., was recently elected president of the American Standards Association.

Other officers named included: Van H. Leichliter, American Steel and Wire Division, U.S. Steel Corp., vice-president; and board members H. E. Cheesebrough, Engineering Division, Chrysler Corp.; Axel Jensen, Bell Telephone Laboratories; Dr. W. J. Sweeney, Esso Research and Engineering Co.; A. E. Pringle, II, Pringle Electrical Mfg. Co.; and R. M. Gates, Air Preheater Corp., representing the American Society of Mechanical Engineers, was re-elected to the board.

A unanimous vote was cast requesting the Association to set up a planning committee of experts to study and make recommendations to industry on standards for the "safest and most profitable use of nuclear energy in industrial processes."

SOUTHLAND CENTER RISES IN DALLAS

A building permit for construction of the initial phases of Southland Center has been granted by the City of Dallas, Texas.

The permit for a total of $14,150,000 is the largest single building permit ever issued in the city, and Southland Life Insurance Company paid over $20,000 as a building permit fee.

Construction will be completed in 1958, and will involve approximately 1,500,000 sq. ft. of building structure; will house a 42-story Southland Life office tower; a 28-story, 600-room, Sheraton-Dallas luxury hotel; a 2,000-car underground garage; and air conditioned arcades of restaurants, shops and clubs.

American Bridge Division of U.S. Steel Corp. has been awarded contract for steel erection for the entire project.

GILLISS APPOINTED DEPUTY DIRECTOR

C. M. Gilliss, California Department of Public Works, has been given a permanent appointment as Deputy Director of Public Works, according to a recent announcement by Frank B. Durkee, Director.

Gilliss assumed the duties of special representative of the Department of Public Works in December 1952, and has served as acting Deputy Director since last September.

PASSENGER-CARGO MARINE TERMINAL

A $1,000,000 transit shed to handle export and import cargo will be built on the 480 acre passenger-cargo marine terminal site owned by the Los Angeles Harbor Department and preferentially assigned to the Matson Navigation Company, according to a recent announcement by Lloyd Menveg, president of the Harbor Commissioners.

In a unique financing plan, Matson Navigation Company will advance to the Harbor Department the cost of construction in quarterly payments without interest. They will be reimbursed from regular tolls and charges for use of the facility over a five year period.

The big cargo shed will be the third cargo unit constructed at the ocean terminal and will be completed in about 12 months.

NATIONAL CONCRETE MASONRY ASSOCIATION ELECTS

Earl W. Peterson, vice-president of the Ideal Stone Cement Company of Omaha, Nebraska, was elected president of the National Concrete Masonry Association at the close of the 36th annual convention of the association held recently in New Orleans. He succeeds S. Carl Smithwick of Portland, Oregon.

Concurrent with his new duties as president of NCMA, comprising producers of concrete block in the U.S. and its possessions, Peterson will serve as president of the Omaha Industrial Housing Corp. and the Concrete Masonry Association of Omaha.

Named as a member of the board of directors to serve with Peterson was W. B. Hovey of Santa Fe, New Mexico.

SANTA CLARA WELDING SHOW AND CLINIC

The first Santa Clara Valley Welding Show and Clinic will be held in San Jose, April 27-28, co-sponsored by the Santa Clara Valley Section of the American Welding Society and the Engineering Department of San Jose State College.

Scheduled for the Engineering Building of San Jose State College, live exhibits will

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be placed among metallurgical and mechanical engineering equipment used at the college in training young engineers. Weld and metallurgical test equipment will be in operation.

R. A. Huggins, chairman, Show Committee publicity, urges all welding people, engineers, designers, architects, students, instructors and others to attend this free show.

UNIVERSITY OF COLORADO SCHEDULES WORKSHOP

The Department of Architecture and Architectural Engineering of the University of Colorado, Boulder, under the auspices of the College of Education are conducting the fourth annual School Plant Planning Workshop on the Boulder campus from June 18 through July 20.

This workshop is planned to serve school administrators, members of school boards, practicing architects and others interested in the design and building of elementary, junior and senior high schools. Visiting lecturers supplement the Architecture faculty and field trips are arranged to schools completed and under construction in the Boulder-Denver area.

Prof. Thomas L. Hansen, AIA, head, Department of Architecture and Architectural Engineering, The University of Colorado, Boulder, can supply complete information on the project.

FIRE HOUSE FOR VACAVILLE

Architect Albert W. Kahl, AIA, San Mateo, has been commissioned by the City of Vacaville to design a new fire house. Estimated cost of the work is $45,000.

LOW RENT HOUSING PROJECT STARTED

Architects Ambrose & Spencer of San Francisco are preparing drawings for construction of a 164-unit Low Rent Housing Project to be constructed between Golden Gate Avenue and Turk, Buchanan and Webster Streets in San Francisco.

The project, comprising two 10 or 12-story reinforced concrete buildings, with 2 elevators to each building, will cost an estimated $1,800,000.

CALIFORNIA ARCHITECTS SEEK CHANGES IN LAW

The California Council of Architects is seeking to submit a constitutional amendment at this year's November general election, which would permit the State of California to employ private architects and engineers, and "thereby place all of the resources and talents of the architectural and engineering professions at the State's disposal" in carrying forward the region's great building program.

The proposed Constitutional Amendment No. 6 was passed at the 1955 session of the California Legislature, and would provide for the state to employ architects and engineers in private practice, when work cannot be done by obtainable state personnel in the time required by the public interest.

In commenting on the proposed legislation, John Lyon Reid, president CCA, said, "Support of the program is gaining public interest and the California State Chamber of Commerce recently voted to support the amendment."

RAPPAPORT FORMS CONSTRUCTION FIRM

Herman H. Rappaport, Torrance, California contractor, recently announced the formation of the Rappaport Construction Company with temporary headquarters in Torrance, California.

Rappaport was formerly Engineering Construction Manager of Factory Construction for McDonald Brothers.

NEW SHOPPING CENTER STARTS

Groundbreaking ceremonies recently took place for start of a $15 million Southbay Shopping Center to be erected in Redondo Beach at 174th Street and Hawthorne Blvd.

Sidney Brody, president of Brody Investment Company, owners and developers of the project, said the first unit of the center to be erected would be the Southbay Bowling Center. Containing 54 lanes, all with automatic pin setters, it will be the largest bowling center west of the Mississippi.

The shopping center as a whole, comprising 50 acres, will contain some 35 tenant stores, including The May Company, J. J. Newberry Co., Ralph's Grocery Co., Thrifty Drug Stores, Bank of America, Gallenkamp Shoe Co. and the Union Oil Company of California.

MARINE FIREMEN MEMORIAL BLDG.

The AFL-CIO Marine Firemen's Union of San Francisco has commissioned architect John W. Gloe of San Francisco to design a new Memorial Building to be built in San Francisco.

OFFICE BUILDING

Architects Bolton White and Jack Herman of San Francisco are completing drawings for construction of a new office building to be built in Fresno for the

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Industrial Indemnity Company of San Francisco.

The one story building will be of brick and frame construction and will contain about 12,000 sq. ft. of floor area.

MOTEL AND RESTAURANT

Architects Randall & Yinger of Pomona are completing working drawings for construction of a 1 and part 2-story concrete block motel and restaurant at Amboy in San Bernardino County.

Construction includes service station, motel office and restaurant of concrete block, composition roofing, metal sash, slab floors, natural gas heating, plate glass, structural steel, provision for future swimming pool, septic tank and cesspool.

ROY L. SMITH NAMED BY SISALKRAFT

Roy L. Smith has been appointed resident representative in the Central California area for American Sisalkraft Corporation products, according to an announcement by company officials.

Smith will make his headquarters in Fresno.

The technical and educational meetings were attended by many California legislators, and governmental officials, as well as engineers from all sections of the state.

SCHOOL BONDS APPROVED

Voters of the La Habra School District, La Habra, California, approved a proposal at a special election to issue and sell bonds in the sum of $550,000 to finance the construction of new school facilities.

RESIDENCE IN LOS ALTOS

Architect Paul J. Huston of Palo Alto is completing drawings for construction of a $220,000 home to be built in Los Altos.

Work includes a 10,000 sq. ft. 1-story frame and structural steel home; lots of glass, enameled panels, marble exterior, copper and built-up roof; swimming pool and cabanas.

Schmaling & Stenbit of Palo Alto are the contractors.

TELEPHONE EXCHANGE

Architect Aleck L. Wilson, AIA, San Francisco, is completing drawings for construction of an 8-story and basement addition to the main telephone building in Sacramento.

The work includes an "L" shaped structural steel frame and reinforced concrete addition, 139 x 52 ft. When completed the new telephone exchange building in Sacramento will represent one of the finest in the Pacific Telephone & Telegraph Company's system.

TEAMSTER'S UNION ACQUIRES NEW SITE

The Brotherhood of Teamsters Local No. 85, of San Francisco, has purchased the old Lick-Wilmerding School property on 17th Street between York and Hampshire, San Francisco, and will soon start plans for erection of a new Teamster's Union building.

Harold Lopez, San Francisco, is secretary of the organization.

JOHN W. CERVENKA IS NEW SALES MANAGER

John W. Cervenka has been appointed General Sales Manager of the Builders Hardware Division of Adams-Rite Manufacturing Company of Glendale, California, according to Arthur Adams, firm president.

Cervenka was formerly employed in the lighting field in Chicago and New England states.

FACTORY AND WAREHOUSE

Structural Engineers Simpson & Stratta of San Francisco are completing designs for construction of a 1-story warehouse and factory building to be built in Modesto.

The building will contain 100,000 sq. ft. of area; will be of reinforced concrete tilt-up construction, with a wood roof.

ARCHITECT SELECTED

Architects John U. Clowdsley, Jack F. Whipple and Howard G. Bissell of Stockton have been commissioned by the College of the Pacific to draft plans and specifications for construction of a new Women's Dormitory building on the College of the Pacific campus which will provide facilities for 400 women.

The estimated cost of the work is $1,400,000.

OTTO BACHRACH NAMED HEAD OF LOS ANGELES BRANCH

Otto Bachrach has been named manager of the new Los Angeles offices of the Building Products Division of L. Sonneborn Sons, Inc., of New York, according to a recent announcement by Alvin S. Baer, general manager of the Building Products Division of the firm.

Opening of the West Coast facility is the first of several planned throughout the U.S. and Canada and coincides with re-

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cent doubling of the firm's West Coast sales staff with new representatives appointed for Arizona, Nevada, Oregon, Washington, and Idaho.

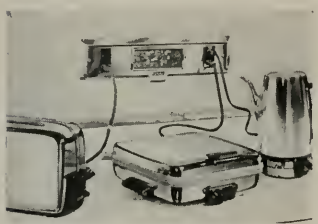
SAN JOSE CITY HALL

Architect Donald Francis Haines, AIA, San Jose, is completing drawings for construction of the new $1,967,000 City Hall building to be erected in San Jose for Santa Clara County.

The building will be of 3-story construction, plus basement; structural steel frame, reinforced concrete construction.

AMERICAN GLOBE'S NEW ELECTROPANEL

A significant forward step in the solution of adequate wiring for use of four electrical appliances at one time without danger of overloading circuits or blowing out fuses is achieved with introduction of a new appliance center for the home by the Globe American Corp.



The new unit converts 220 volt current to regular 110 volt service, thus permitting homemakers to use four electric appliances at one time; designed primarily for kitchen installation, it may also be installed in the recreation room, porch, breezeway, or terrace. It provides lowest cost method of obtaining everyday convenience of adequate wiring; is compact, 17½" wide by 4¾" high. For full details, write Globe American Corporation, Merchandise Mart Plaza, Chicago 54, Illinois.

TELEPHONE BUILDING

Work has started on the Pacific Telephone Company's $250,000 Tustin, California, wire center building which will house dial systems equipment to serve the Santa Ana KImberly exchange.

Plans call for a reinforced concrete and masonry building designed for eventual 2-story height and removable steel rear wall for future expansion.

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Cover Picture

NEW PACIFIC MUTUAL BUILDING

San Francisco, Calif.

Loubet & Glynn, Architects

One of San Francisco's newest downtown buildings. See page 10 for additional data.

ARCHITECTS' REPORTS—
Published Daily
Vernon S. Yallop, Manager
Telephone DOuglas 2-8311

ARCHITECT AND ENGINEER

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

ARCHITECTURE FOR THE GOOD OF LIFE

Theme of the 88th annual convention of The American Institute of Architects, which will be held in Los Angeles in May, has been set as "Architecture for the Good of Life."

This is a particularly appropriate theme for a convention in Southern California, where nature encourages the architect in providing the physical background for achieving enjoyable living.

In the design of school or church, hospital or home, meeting man's needs for enjoyment of life is influencing architectural thought. New materials and new techniques, more and more of which are becoming available daily, provide for a flexibility and range of design.

It is estimated more than 2,000 architects will gather from all parts of the world—what an excellent opportunity to "show" Southern California and West Coast architecture to those who can, and probably will, spread the "western living" theme to every part of the globe.

* * *

THE STUDY OF LOAFING

In depression and WPA days it was called boondoggling. In the armed services, it's goldbricking or goofing off. In certain circumstances, it's featherbedding. In plain English, it's loafing on the job. Even in this period of record productivity, it's a problem for many conscientious workers and bosses. But in some circles mention of it is tabu because of the peculiar notion that such comment is a reflection on all labor.

The topic turned up recently in an Associated Press dispatch from Kansas City, where Andrew Harvey, president of an AFL-CIO electrical workers local, has been wondering what to do to increase productivity in the construction industry. In his own words, to quote the AP, "Some projects are more like a convalescent home than a construction job."

What to do about it? Harvey has opened what he thinks is a new approach. He's arranged, through the University of Kansas, to have members of his local attend a course to study loafing. To study the ill effects, that is. Fifty union members, three times as many as expected, have joined and future courses are contemplated. This is part of the union's education program to impress on its members the need for increasing productivity.

Harvey noted figures that today's new house may cost up to 25 per cent more than it would if all workers on the job put forth their best effort. We mention that because of its source. If it were voiced by someone in management, he probably would be branded as antilabor by many union members who would tell about how hard they work, which of course is true of most, but should not cloak the idlers.

The serious study of loafing by the local in Kansas City appears an intelligent project.

* * *

OPERATION HOME IMPROVEMENT

More than fifty cities and communities from coast to coast and as far away as Hawaii and Alaska have now launched local-level Operation Home Improvement drives in a huge private industry campaign to repair and modernize 20,000,000 of the nation's older dwellings.

Sponsored by over seventy leading trade associations and firms in the building, home equipment and finance fields, together with the Chamber of Commerce of the United States, the year long campaign was organized to encourage homeowners to improve their homes and make it easier for them to obtain financing, materials and services.

Many local chambers of commerce are spearheading community Home Improvement programs with the help of building contractors, building material manufacturers and their dealers and retailers, architects, bankers, lending agencies, and civic and governmental leaders. Among outstanding movements on the Pacific Coast are the campaigns being conducted in Los Angeles, San Francisco, Oakland, Seattle, Portland, and Denver and Tucson in the Pacific Slope area.

In Seattle, a tentative budget of $100,000 is being underwritten by local businessmen. Governors of several states including Arizona, as well as a number of mayors and county officials have issued "Home Improvement Year" proclamations for their states and localities.

Operation Home Improvement will be one of the key themes of home shows to be held throughout the nation. In daily newspaper and magazine advertisements, window displays and promotional materials of all types, thousands of lumber dealers, plumbing and heating contractors, savings and loan associations and building supply and appliance dealers are featuring an official seal, bearing the slogan "'56 — the Year to Fix." One large chain department store has set up special home improvement information centers in each of its 709 retail stores.

Fred F. Florence, president, The American Banking Association, said recently that "bankers have an exceptional opportunity for community service by financing home improvement on a sound basis. Especially in these times when our economic resources are so fully employed, a most desirable way of lifting our housing standards is the improvement of existing homes."

SAFEWAY STORE, Richmond, California
Architects: Wurster, Bernardi & Emmons
General Contactors: Macdonald, Young & Nelson
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TEN YEARS OF BUILDING AND ENGINEERING CONSTRUCTION

MacDONALD, YOUNG & NELSON, INC.

THEY STEER THE SHIP:
C. Edward Nelson (left), Graeme K. MacDonald and Dallas (Pete) Young (right)

By FRED W. JONES

Over the years California builders have earned deserved recognition for the part they have played in the construction field. Contracts totalling many millions of dollars have been successfully carried out—projects such as the Golden Gate Bridge, the San Francisco-Oakland Bay Bridge, the 22 story Equitable Life Assurance Building in San Francisco, Stonestown (the city within a city), one of the nation's largest residential and commercial centers, and the massive Distribution Structures on the San Francisco and Oakland bridge terminals.

The two last mentioned projects were executed by the San Francisco construction firm of MacDonald, Young & Nelson, Inc., who, having accepted the challenge of modern architecture and its multiple structural requirements, have met the problems without hesitation, have envisioned and applied the most modern building methods toward the economical execution of their work.

Only by the application of these more efficient operations and the use of new techniques to speed construction time and improve workmanship, can

the builders of today control and stabilize costs. The approach is absolutely necessary to counteract rising material and labor costs and at the same time preserve the confidence of those individual owners and companies who are risking their capital and exhibiting willingness to invest.

SEARCH FOR NEW METHODS

This searching for new methods and improvements of construction procedures is the undeniable obligation of today's builders if they are to make any contribution toward the expansion of our industry and toward the comfort and living of our people. It is necessary that those who are willing to risk and develop must have the complete cooperation of the builder to provide an end product that is economically stable, and one that contributes to the benefit rather than the inflation of our economy.

The combined and sincere efforts of architects, engineers and contractors in furthering modern architecture and modern building methods are reflected in the following projects completed by MacDonald, Young & Nelson, Inc.

FIRM ORGANIZED

This firm started in business in 1945 although prior to then all three partners had been actively engaged in the engineering and construction fields for many years. The trio, in pooling their experience, offered the building industry a cumulative record of over eighty years. Much of this early experience was with the former company of MacDonald & Kahn, Inc., general contractors in San Francisco for almost forty years and one of the original six companies to build the Boulder Dam. Upon the liquidation and dissolution of MacDonald & Kahn, Inc., MacDonald, Young & Nelson, Inc., was organized and today the company ranks with the top builders of the West Coast.

Graeme MacDonald, president, graduated from Stanford University in Engineering in 1933. He entered the firm of MacDonald & Kahn, Inc., that year and continued to be associated with it as engineer, director and stockholder, until formation of the present firm.

Dallas Young, better known as "Pete" in Western construction circles, spent 23 years with the MacDonald & Kahn Company, where he supervised building operations totalling over 200 million dollars.

C. Edward Nelson, a graduate in civil engineering at the Polytechnic College, Oakland, served many years with the MacDonald & Kahn Company as head of its engineering and estimating department, and when the

PACIFIC GAS and ELECTRIC Power Station, San Francisco
WILLIAM G. MERCHANT, Architect

PACIFIC MUTUAL BUILDING, San Francisco
LOUBET & GLYNN, Architects

firm liquidated in 1945 he became one of the organizers of MacDonald, Young & Nelson, Inc.

UNIQUE FEATURES

Several unique engineering features, as well as a strictly ultra-modern building, are combined to give the Pacific Gas & Electric Company power station in downtown San Francisco a project of more than passing interest. The usual construction procedure of this $4,800,000 structure was reversed when the large precast travertine blocks, five feet by seven and one-half feet square, were used as the outside form for the concrete walls, rather than being installed on the face of the building after the walls were completed.

One of the latest contracts to be completed is the nine story Pacific Mutual Life Insurance Building at California and Kearny Streets, San Francisco. Constructed of reinforced concrete, the lower stories are faced with Swedish Emerald Pearl Granite and the upper stories with soft green ceramic veneer. The windows and trim are aluminum.

Each floor has approximately 12,500 square feet of free space. The interior partitions are of dry wall construction and the ceilings are of acoustical material, above which are air conduits for the ventilating system. Above the eighth floor is an enclosed roof-top area containing a conference room with kitchen facilities.

Floors, second through eighth, together with the penthouse rooms, are provided with separate mechanical systems, thereby insuring flexibility of operation, with minimum cost.

ELEVATOR LOBBY

Pacific Mutual Life Insurance Company

San Francisco

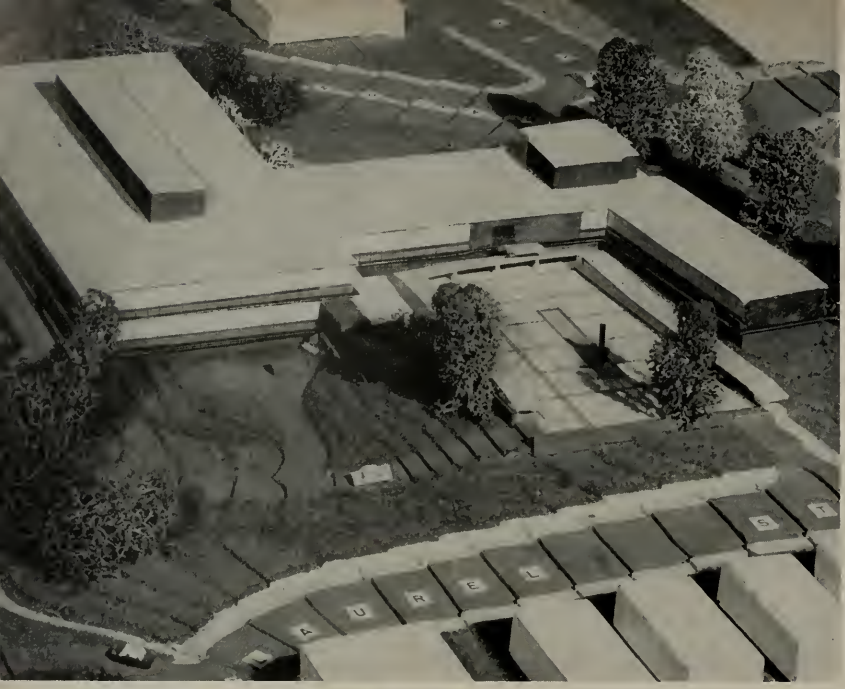
Featured in the terrazzo floor entrance lobby is a deeply carved redwood plaque, nine feet in diameter, executed by Spero Anargyros, and depicting California's world famous giant redwood tree "Wawona," modeled after the Sequoia Big Tree in Yosemite National Park, and which is the Pacific Mutual's trade mark. The lobby itself is finished in red Porta Santa marble, imported from Italy.

The entrance lobby is banked with the very latest equipment in elevator engineering. Automatic control replaces the old style cars with their attendant operators. A push button panel in each cage enables the passenger to reach his desired floor with dependable speed. Each car carries a maximum of 20 persons.

Now under construction is the home office building for the Fireman's Fund Insurance Group at California

STREET ENTRANCE

Pacific Mutual Life Insurance Company



MODEL of NEW HOME OFFICE BUILDING for Fireman's Fund Insurance Company, San Francisco
EDWARD B. PAGE, Architect

and Laurel Streets, San Francisco.

The horizontal, country-type structure will be unique among the typically vertical office buildings in San Francisco to conform to the lines of the surrounding area, which is predominantly residential. The 10-acre, tree-shaded lot is an historic site bounded by California Street on the north, Presidio Avenue on the east, Euclid Avenue on the south, and Laurel Street on the west.

The structure, which will overlook San Francisco, has been designed to relate to its park-like setting. A flat roof will cover the 190,000 square feet of building area. Graduating from one floor, at the highest portion of the lot facing Laurel Street, to three floors facing California Street and Presidio Avenue, the building will have two main entrances—a formal court with parking facilities on Laurel Street and an entrance on California Street adjacent to an off-street parking area for more than 200 cars. The exterior of the building will be aluminum and glass with brick facing. Cantilevered construction will provide window walls on all floors.

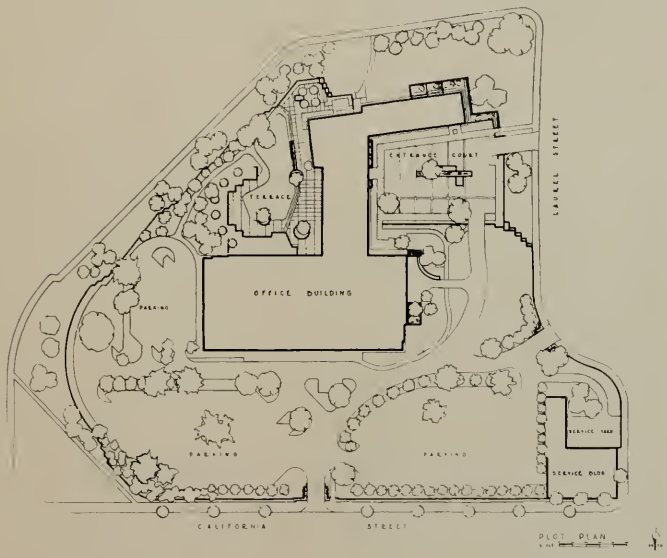
Interior design and facilities of the completely air-conditioned building have been planned for the comfort and convenience of the company's staff of nearly 1,000. Highlighting this planning is a new concept of office lighting, area illumination, which will furnish maximum light quality for optimum working conditions. The modern lighting fixtures will be suspended above an open metal grid, so efficient area illumination will be achieved without the usual forest of visible fixtures. Pleasing, light colors on walls, floors and equipment will eliminate distracting contrasts and complement the over-all feeling of openness.

Although the major three-story working areas is almost the size of a football field — 300′ x 144′ — most employees will be no more than 40 feet from an outside window. Desk areas will surround a central "core" in which service facilities and conference rooms are grouped.

Sunny and light, yet efficient, the employee cafeteria will incorporate modern cafeteria practices in pleasant, relaxed surroundings. Planned to seat 400 employees at

MAIN FLOOR PLAN

PLOT PLAN



one time, the cafeteria can—when tables are removed—seat 800 people for large staff meetings. The cafeteria will open to a large, sunny wind-shielded terrace which will have facilities for relaxation and recreation.

Extensive landscaping will surround the Fireman's Fund plant. Of the total estimated $4 million cost, more than $3 million will go into the building proper, $600,000 on new furniture, and $300,000 on landscaping and parking facilities.

MEMORIAL TEMPLE

The new California Masonic Memorial Temple is the latest major contract to be awarded MacDonald, Young & Nelson, Inc. The structure will be located on the corner of Taylor and California Streets, San Francisco—one of the last historic sites on famed Nob Hill of early California history.

The $5,000,000 structure will be faced with white

MacDONALD, YOUNG & NELSON, INC. . . .

INSURANCE COMPANY of NORTH AMERICA

Los Angeles

ROBERT M. BROWN, Architect

PACIFIC MUTUAL INSURANCE BUILDING

Masonry, Exterior Stone Facing, Ceramic Veneer

by GEORGE W. REED & CO.

1390 South Van Ness Ave., San Francisco 10, Calif.
ATwater 2-1226

marble with symbolic sculpture on the front. There will be a 3,000 seat auditorium, a dining room seating 1,200 and a spacious exhibit hall. Below the California Street level will be five floors of reinforced concrete basement garages. Architect of the building is Albert F. Roller.

STONESTOWN DEVELOPMENT

The Stonestown development on a 26-acre site facing 19th Avenue, San Francisco, was begun by MacDonald, Young & Nelson in 1949 and finished less than two years later. Four ten-story reinforced concrete buildings and ten three-story frame buildings, housing 680 apartments, are a part of this $25,000,000

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STONESTOWN, San Francisco. Aerial view of large development work.

Stonestown's commercial development has been pronounced the most extensive outlying center in California. On the 1,500,000 sq. ft. area are two department stores, theater, market, medical building, restaurant, gas station and some 45 individual stores providing complete shopping facilities for every need.

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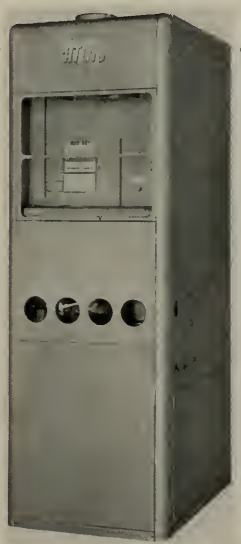

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OAKLAND, 1431 Thirty-second St.

MEDICAL DENTAL BUILDING, STONESTOWN, San Francisco
WELTON BECKET & ASSOCIATES, Architects

Pictured below: THE MALL, STONESTOWN, San Francisco

SAFEWAY STORE, Oakland. **WURSTER, BERNARDI & EMMONS, Architects.**

outside scaffolding and material towers. Even the concrete was hoisted by mobile mixing and hoisting equipment which moved in a few hours from building to building as the pours were alternated each day. This mixing and hoisting equipment eventually had 116 feet of tower on it when the tenth floor of each building was finally poured. The cycle of raising forms, setting reinforcing steel, pouring concrete and stripping forms was accomplished in eight calendar days for each floor.

RESULT OF PLANNING

Stonestown is the answer to thorough planning by the owner, supplemented by modern and efficient architectural thinking, plus the application of advanced techniques in construction methods. The

TERRAZZO FLOORS

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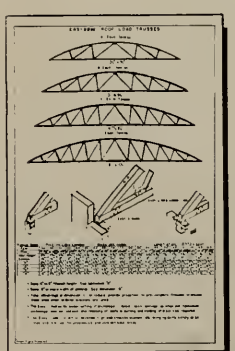

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PORTION OF THE MARKET AREA IN STONESTOWN, San Francisco

end product of this combination in planning was, and always is, an economical job with satisfactory costs.

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In heavy reinforced concrete construction MacDonald, Young & Nelson, Inc., have made excellent progress on two Distribution Structures for the California Division of Highways, one on the Oakland side of the

KINGS MARKET, San Francisco

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PICTURED ABOVE:

Boy Bridge Distribution Structure.

6,000 tons of structural steel were fabricated and erected on this job.

(Photo by Independent Iron Works, Inc.)

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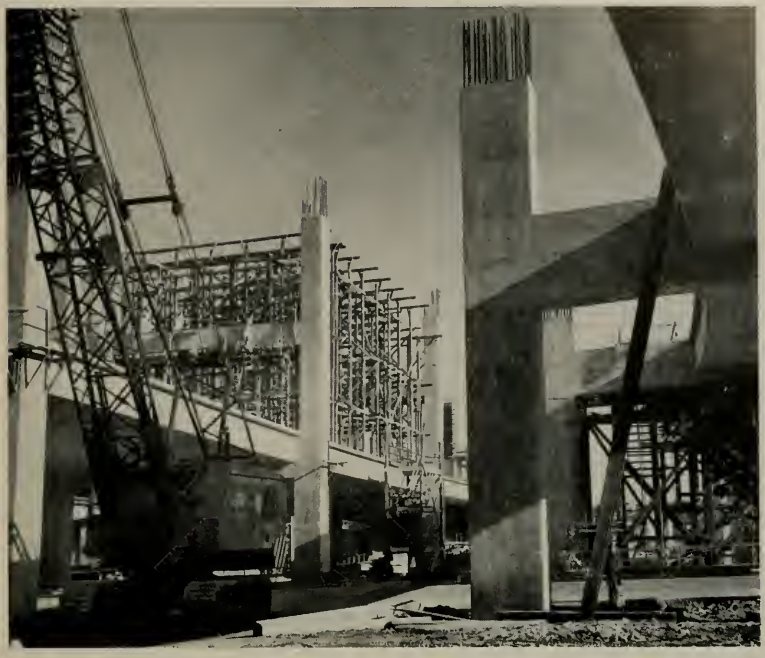

SHOWN ABOVE are separation structures, San Francisco Bay Bridge approach.

BELOW: Aerial view of Fruitvale (Oakland) Freeway overpass.

NIGHT VIEW of LUCKY MARKET, Burlingame, California

WAREHOUSE AND OFFICES constructed for Lucky Stores, Inc., San Leandro, Calif.

B. L. Nishkian, Engineer

J. Lloyd Canrich, Architect

REMODEL of SHREVE & CO., San Francisco, shown above.
ALEC WILSON, Architect (Photo of Fixtures by FINK & SCHINDLER)

BELOW: Oakland Branch of San Francisco Bank. Alterations were completed and ready for occupancy in 60 days.

MacDONALD, YOUNG & NELSON, INC. . . .

UNION CARBIDE BUILDING, 22 Battery Street, San Francisco, remodeled and refaced with stainless steel and glass, and trimmed with red Swedish granite.
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Bay Bridge, the other on the San Francisco approach. Both have been joint ventures with the Morrison-Knudsen Company, Inc. On the Oakland side the MYN-MK builders erected four elevated roadways totaling nearly two miles in length that separate the bridge from the crossflow of Oakland-Berkeley traffic. There were approximately twenty-five thousand cubic yards of concrete and over six thousand tons of struc-

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tural steel used to complete the project.

Now under construction on the San Francisco end of the bridge is the second Distribution Structure of the box girder type which calls for over 55,000 cubic yards of concrete and some 6,500 tons of reinforcing steel. This section ties in with the future Embarcadero Elevated Freeway that will follow along San Francisco's famous waterfront.

Total cost of the two projects will reach approximately $10 million.

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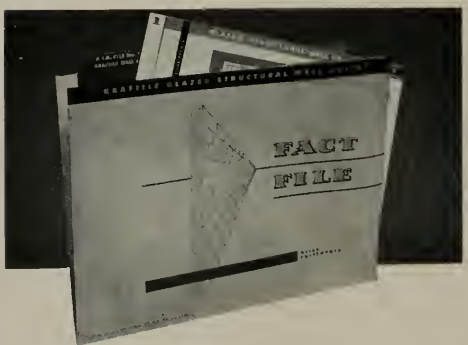

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OREGON CHAPTER

"Practice of Architecture in Foreign Countries," by architects from China, Norway, England, France and South America, was the theme of an interesting March meeting. Van Bailey served as moderator.

The annual Women's Architectural League Dance was observed, April 6th in the University Club, with the appropriate theme of "Carnival."

A color film showing Alden Dow's Theories of Architecture was shown at the April 17th meeting.

Latest developments of building material manufacturers was displayed the latter part of March when the Producers' Council Caravan of Quality Building Products and Modular Application was shown at the Columbia Athletic Club. Several hundred architects, builders, contractors, dealers, engineers and government officials witnessed the showing and learned of the latest product developments now available for use in building new homes and buildings.

SOUTHERN CALIFORNIA CHAPTER

C. Day Woodford has been appointed as delegate-at-large to the California Council of Architects by Paul Hunter, president. He succeeds Ulysses Floyd Rible who resigned to concentrate on work of the National AIA Convention Public Relations committee, and the State Board of Architectural Examiners of which he is a member.

The Third Annual Church Design Exhibit, sponsored jointly by the Chapter, the Museum Association and the Construction Industries Committee of the Los

Northern California Chapter:
Wayne Hertzka, President; Wm. Stephen Allen, Vice-President; Rex Whitaker Allen, Secretary; C. Morrison Stephens, Treasurer; and Directors: Wm. Corlett, Robert Kitchen and Bernard Sabaroff. Executive Secy., May B. Hipsbman. Chapter Offices, 26 O'Farrell St., San Francisco.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Albert Beber-Vanzo, Secty; Stanley Howatt, Treasurer. Club offices 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
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Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institue—Los Angeles:
D. Stewart Kerr, AIA, President; R. R. Coghlan, Jr., Vice-President; W. F. Norton, Secretary; Malcolm Lowe, Treasurer. E. Phil Filsinger, Liaison Officer, Producers' Council, Gladding, McBean & Company.

Angeles Chamber of Commerce, opened in the Rotunda of the Los Angeles County Museum on April 27. The Exhibit of photographs, sketches and models will continue until May 27, and will be available during the National AIA Convention in Los Angeles.

NATIONAL AMERICAN INSTITUTE OF ARCHITECTS CONVENTION

Charles O. Matcham, AIA, Architect, and chairman of the Southern California AIA Host Committee, announces plans are well underway for the 1956 American Institute of Architects convention which is to be held in Los Angeles, May 15-18.

"We have been working on plans for many months now," Matcham declared, "and our committee has come up with what we feel will be an outstanding convention for the more than 2,000 architects and guests expected."

Tours will be sponsored covering outstanding architectural attractions of the Southland, including the Los Angeles Civic Center, Pasadena, Orange county, San Diego, Santa Barbara, Westwood, Bel-Air and Hollywood.

A Hollywood Premiere Night of a major studio production and an evening of entertainment at the Moulin Rouge, will highlight a portion of the entertainment program of the convention.

Serving with Matcham in making AIA National Convention arrangements are: Herbert Powell, Samuel Lunden, John Rex, Ulysses Floyd Rible, Edward Fickett, Douglas Honnold, William Shinderman, Henry L. Wright, C. M. Deasy, Robert Field, Charles Luckman, George V. Russell, A. C. Martin, Jr., John Landon, Francis Merchant, Mrs. Whiting Thompson, Gates Burrows, Wallace Bonsall, Don Campbell, Frank L. Hope, and Roy W. Cheesman.

SOUTHERN CALIFORNIA CHAPTER WOMEN'S ARCHITECTURAL LEAGUE

Mrs. Whiting Thompson of Los Angeles, heading a strong committee of women, has announced several outstanding attractions which will be observed in conjunction with the 1956 Annual Convention of The American Institute of Architects, scheduled for May 15-18, in Los Angeles.

SANTA CLARA AND SANTA CRUZ COUNTIES AIA CHAPTER

"What About Aesthetics?" was the subject of a recent panel discussion with Betty Thompson; Joseph McCarthy, AIA; Kenneth Reid, AIA; William Corlett, AIA; and Chester Root, AIA, Regional Director, taking part.

ARCHITECTURAL EXHIBIT OF CHURCH DESIGN

Members of the East Bay Chapter AIA, participated in a church exhibit and program held by the

(See Page 35)

WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

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American Society of Civil Engineers Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

AMERICAN SOCIETY OF PROFESSIONAL ENGINEERS—Peninsula Chapter

James Atkinson, San Carlos, President of the Peninsula Chapter of the California Society of Professional Engineers, served as Chairman of a panel discussion at the April meeting held in the Redwood City American Legion Hall.

Subject of the program was, "New Engineering Opportunities on the Peninsula," and participating in the discussions were: F. L. Avera, Director of Research for Skippy Peanut-butter Division of Best Foods Corpn., moderator; M. L. Sellers, Public Relations Mgr., Lockheed Aircraft Corp., Missiles Systems Division; Dr. Wm. McBride, Mgr. Tube Development Dept., Varian Associates; P. G. Richards, Plant and Industrial Engineer, I.B.M., San Jose; and W. E. Jarvis of the Hewlett-Packard Co.

FEMINEERS

"Say It With Music," the 1956 program theme for The Femineers, will feature a song title in keeping with each monthly meeting. The April Air was "Baubles, Bangles and Beads," and highlighted a talk by Jules Howard from the Oakland firm of Herbert's Estates, Liquidators and Jewelers, on the subject, "Historical and Royal Gems for Royalty, Notable and Glamorous Men and Women."

The meeting was held in the San Francisco Elk's Club, with Mrs. Mark Falk introducing the speaker. Table decorations were in charge of Mrs. F. W. Kellberg.

STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

C. B. Monk, Jr., Mgr. Engineering and Architectural Research, Structural Clay Products Research Foundation, Geneva, Illinois, was the principal speaker at the April meeting in the San Francisco Engineers' Club.

"New Horizons in Structural Clay Research" was the subject of Monk's talk, in which he reviewed highlights and some recent discoveries in regard to: a) Transverse resistance to unreinforced clay masonry; b) Statistical approach to evaluation of safety factors for both unreinforced and reinforced clay masonry; and c) New analytical approaches to the design of masonry walls.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

Col. Wendell P. Trower, CE (Ret.), Assistant to the Vice-President of Kaiser Engineers, was the main speaker at the April meeting in the Presidio Officers Club, San Francisco.

Col. Trower spoke on the "St. Lawrence Seaway," having served as District Engineer of the Great Lakes Division, Corps of Engineers, U. S. Army, which was designated by the St. Lawrence Seaway Development Corporation as their agent for the design and construction of the Seaway. Actual design and construction was carried on by the Buffalo District, and at the time of Col. Trower's retirement in 1955, engineering planning of the project was nearing completion and contracts had been awarded for the excavation of the Long Sault Canal and the two lock structures.

CLAIRE H. FELLOWS ADDRESSES JOINT ENGINEERS MEETING

Clare H. Fellows, Director, Engineering Laboratory and Research Dept., The Detroit Edison Co., was the principal speaker at a recent meeting of The American Institute of Electrical Engineers, San Francisco Section; and the Northern California District of the American Society for Testing Materials, in the Engineers Club, San Francisco.

Fellows spoke on the subject "Research in the Electric Power Industry," including generation, transmission and distribution. He illustrated many points in his address which included aspects of newest development in high voltage aluminum cable and extra-high voltage cable; wood preservation for poles, and cross

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section
R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch
Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California
William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Association
of Oregon
Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)
R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District
H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post
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arms; corrosion of galvanized steel tower transmission; tree growth control; fish fences; insulating oils; and hydrocarbons, and nuclear power.

SOCIETY OF AMERICAN MILITARY ENGINEERS

Maj. Gen. James B. Newman, U. S. Air Force Ret., has been nominated for president of the Society of American Military Engineers, and Rear Adm. H. Arnold Karo, Director, U. S. Coast and Geodetic Survey, for vice president.

New officers will be installed at the 36th Annual Meeting of the Society which will be held May 14-15, in Washington, D. C., with The Army Engineer Center, the Engineer School, and the Engineer Research and Development Laboratories at Fort Belvoir, Virginia, serving as hosts.

The Department of Defense will conduct an Industrial Mobilization Symposium at the Mayflower Hotel on the morning of May 15, stressing the fact that technological development has so exceeded the range and fire power of weapons that it has virtually eliminated time and space as outer ramparts of American defense.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

"Shearing Strength of Reinforced Concrete Beams and Frames," was the subject of a talk by Boris Bresler, Associate Professor, University of California at Berkeley, before the April meeting in the Rodger Young Auditorium, Los Angeles. He discussed results of a series of tests at the University for the Reinforced Concrete Research Council on the Ultimate Strength of Concrete under Bi-Axial Stresses.

New Members: Irving M. Berger, Donald Rex Kay, Mortimer Margolin, Lowell Alden Napper, and Eugene Squires, Associates; Albert Salibian, Allied Member; and J. N. Dudley Smith, Member.

CALIFORNIA SOCIETY OF PROFESSIONAL ENGINEERS SCHEDULE MODESTO MEET

The California Society of Professional Engineers will hold their 1956 Annual Meeting in Modesto on May 31, June 1-2, according to an announcement by Fred Johnson, President.

A tentative program, developed by the General Committee under Chairmanship of Oliver Deatsch, Stanislaus County Surveyor, includes a business ses-

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sion; an "old fashioned strawberry social"; Annual Banquet and Installation of Officers; and a Chicken Fry at the Miller Ranch.

A special program of tours has been arranged for the inspection of the numerous industrial and processing plants in the area.

AMERICAN SOCIETY OF CIVIL ENGINEERS PACIFIC SOUTHWEST CONFERENCE

The Ninth Annual Conference of the Pacific Southwest Council, American Society of Civil Engineers, was held in Pasadena, this month.

Among outstanding speakers participating in the meetings were Enoch Needles, national president of ASCE and U. S. Congressman Craig Hosmer.

The Council comprises ASCE Sections of San Francisco, Sacramento, Intermountain, Arizona, San Diego, Hawaii, and Los Angeles, with the Los Angeles Section serving as hosts to the Conference.

ENGINEERING CAREER CONFERENCE FOR HIGH SCHOOL STUDENTS

A career conference for high school students on Engineering and Science was held by the San Francisco Engineering Council in cooperation with the San Francisco Board of Education, on April 10, at the City College in San Francisco.

The Conference, divided into two separate groups of panel discussions, covered many fields of Engineering and Science.

Col. John A. Graf, District Engineers, San Francisco District Corps of Engineers, U. S. Army, served as chairman. Speakers included: Dr. Louis G. Conlan, President, City College of San Francisco; John A. Gast, Carbide and Carbon Chemicals Co., Chairman, San Francisco Engineering Council; and J. Emmett Maider, Mgr., Commonwealth Edison Atomic Project, General Electric Co., San Jose, California.

CONSTRUCTION SPECIFICATIONS INSTITUTE GIVEN CHARTER

The San Francisco Area Chapter of the Construction Specifications Institute was presented with its Charter recently with J. Norman Hunter, AIA, member of the National Board of Directors, making the presentation.

Purpose of the CSI is to promote the improvement of specifications to the benefit of all concerned. Technical committees are formed to do research on specifi-

(See Page 35)

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A.I.A. CRAFTSMANSHIP AWARD TO VAUGHAN

Wayne Vaughan, president of Wayne Vaughan & Company, Inc., Drywall Interiors of Los Angeles, has been awarded the 1955 Certificate of Crafsmanship in the basic trades by the Southern California Chapter of The American Institute of Architects. It was the first award of its kind ever presented to a member of the interior wall surfacing trades.

Presented annually, the award is designed to encourage excellence and craftsmanship in the construction industry and to afford recognition of exceptional merit, and the presentation was made by William Glenn Balch, president of the AIA Chapter.

LOVEGREEN APPOINTED BY CALAVERAS CEMENT

Harold A. Lovegreen has been appointed assistant sales manager of Calaveras Cement Company, according to a recent announcement by Mel J. London, company vice-president in charge of marketing. He will make his headquarters in San Francisco.

Lovegreen was recently stationed in Los Angeles as white cement sales representative for southern California, western Nevada, Arizona and Utah.

STANFORD MEDICAL SCHOOL AND TEACHING HOSPITAL

Architect Edward D. Stone of Palo Alto is preparing drawings for construction of a $15,000,000 Medical School and Teaching Hospital to be built on the Stanford University campus at Palo Alto.

The project includes a 3-story building of reinforced concrete construction.

R. REESE MYERS ELECTED PRESIDENT OF HOME BUILDERS

R. Reese Myers, Los Angeles builder, was elected president of the Los Angeles Chapter of the Home Builders Institute at the organization's recent annual meeting.

Myers predicted that by 1986 California will house one-fifth of the nation's total population if the present rate of growth continues.

ROBCO PURCHASES NEW DENVER PLANT SITE

Purchase of a 50-acre site southwest of Denver for construction of a new plant to expand Robco Structural Glazed Tile capacity has been announced by the Robinson Brick and Tile Company.

The new site is in an industrial area and construction of the new facilities is part of a planned long range program to substantially increase product output of the company.

SCHOOL BONDS ARE APPROVED

Voters of the San Anselmo Elementary School District recently approved sale of school bonds for construction of a new 7-classroom Hidden Valley Elementary School to be built in San Anselmo.

Architect John Lyon Reid & Partners of San Francisco are completing drawings for construction of a frame and stucco building.

LOCKHEED PLANT FOR SUNNYVALE

The Missiles Division of Lockheed Aircraft Corp., Van Nuys, California, recently acquired a 275 acre site near Sunnyvale for construction of a missile manufacturing plant.

ENGINEER SELECTED

Engineer Ralph M. Parsons of Los Angeles has been selected by Lockheed Aircraft Corporation of Van Nuys to serve in connection with construction of a new guided missile manufacturing plant which is to be built near Sunnyvale in Santa Clara County.

BOYS CLUB GETS NATATORIUM

The architectural firm of Appleton & Wolford, San Francisco, has completed drawings for construction of a Natatorium building to be built near 17th and Guerrero in San Francisco for the Columbia Park Boys Club, Inc.

The project comprises construction of a 2-story Class 1-B reinforced concrete and structural steel building. Facilities include a swimming pool, shower and locker rooms, and dressing rooms. Estimated cost of the work is $135,000.

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RODDIS PLYWOOD BUYS CALIFORNIA BARREL CO.

Certain assets of the California Barrel Co., Ltd., of San Francisco, has been acquired by the Roddis Plywood Corp., including the Western Cooperage Company of Portland, Oregon.

The California Barrel Company's main factory is at Arcata, California, where more than 750,000,000 feet of timber are held in reserve. These timber reserves are important additions to Roddis, as the firm presently operates a plywood plant and two sawmills in the Arcata area.

MASONIC WAR MEMORIAL

Architect Albert F. Roller of San Francisco is completing drawings for construction of a Masonic War Memorial Temple to be built on the southwest corner of California and Taylor Streets in San Francisco at an estimated cost of $4,000,000.

The project comprises a 3-story building and 5 levels of underground garage space; provision for meeting rooms, banquet halls, offices of the Masonic Grand Lodge of California. Construction will be of reinforced concrete and structural steel with marble exterior on 2 sides.

J. B. MORNINGSTAR IS NAMED VICE PRESIDENT

J. B. Morningstar, Menlo Park, California, has been elected vice president of the Morningstar, Nicol, Inc. of New York, according to a recent announcement by George J. Muller, company president.

West Coast headquarters of the firm, manufacturers of packaging and paper converting glues, industrial adhesives and polyvinyl resin emulsions, are maintained in San Francisco.

HOSPITAL ADDITION

Architect John W. Bomberger of Modesto, is completing drawings for construction of a 50-bed addition to the Memorial Hospital of Stanislaus County in Modesto.

The addition costing an estimated $35,000, will be of 1-story, reinforced concrete construction.

ATOMIC RESEARCH LABORATORY

The General Electric Research, Schenectady, New York, has acquired 1,658 acres of land near Pleasanton in Alameda county and will soon start construction of an Atomic Research Laboratory.

The buildings are scheduled for completion in 1957 and comprise a small proto-type power reactor, a radio active material laboratory, an experimental physics laboratory with a 5,000 kilowatt reactor; and the estimated cost of the project is $5,000,000.

OFFICE AND LABORATORY

Stanford Research Institute of Stanford Village, Menlo Park, is constructing a new 100,000 sq. ft. brick and structural steel office building, and a 20,000 sq. ft. brick and structural steel laboratory building on their property at Stanford Village.

Architects J. E. Stanton & William F. Stockwell of Los Angeles are completing drawing for the project which will cost an estimated $1,500,000.

NEW STEAM POWER PLANT

The California & Hawaiian Sugar Refining Company are constructing a new steam plant at the C&H Sugar Refinery in Crockett, California, at an estimated cost of $3,500,000.

Engineering plans are being prepared by the Bechtel Corpn of San Francisco.

CALIFORNIA ANNOUNCES LARGE WORKS PROGRAM

State Architect Anson Boyd recently announced the Division of Architecture expects to start construction on more than $88,000,000 of building projects during 1956.

Among the major projects listed by Architect Boyd are the Fairview State Hospital, Administration and Hospital Unit, $7,602,200; State Office Building Annex, San Francisco, $6,792,300; California State Prison at Soledad, Cell Buildings, $6,676,900; Youth Training School at Chino, $6,278,300; Metropolitan State Hospital, Ward Buildings, $5,356,900; Patton State Hospital, Ward Buildings, $4,169,000; Agnews State Hospital, Receiving and Treatment Building, $3,863,000; and the Sonoma State Hospital, Ward Buildings, $3,778,300.

VETERAN'S MEMORIAL

Architect C. A. Caulkins, Jr. of Santa Rosa, is completing plans for construction of a Veteran's Memorial building in Sebastopol for the Sonoma County Board of Supervisors.

The new building will be 1-story, frame and stucco construction, and will cost an estimated $250,000.

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WITH THE ENGINEERS

(From Page 32)

cations writing and to make available information to be used in preparing specifications.

Elected to serve as officers for the ensuing year were: Vincent G. Raney, AIA, President; Henry McLain, Vice-President; Robert W. Harrington, Secretary; and Albert E. Barnes, Mgr. Architectural Products Promotion, Gladding, McBean & Company, Treas.

WORLD CONFERENCE ON EARTHQUAKE ENGINEERING

A World Conference on earthquake engineering will be held at the University of California, Berkeley, June 12-16, which will bring together internationally recognized authorities on seismology and earthquake engineering from Japan, India, Germany, Colombia, Chile, Ecuador, New Zealand, Turkey, Pakistan, Greece, Mexico, and Italy.

Observance of the 50th anniversary of the 1906 San Francisco earthquake-fire will be made in the key-note address for the engineering meeting. The 5-day meeting will be devoted to the presentation of technical papers on the latest seismic design and construction practices in all the major seismic areas of the world. Panel discussions will be held to discuss design and construction practices in the different countries.

George W. Housner, President of the Earthquake Engineering Institute, and Professor of Civil Engineering, California Institute of Technology, stated the principal goals of the meeting as, "The establishment of a clearer understanding among the many groups concerned with earthquake problems and a pooling of their knowledge for the benefit of mankind all over the world."

A.I.A. ACTIVITIES

(From Page 29)

Conference of Church Architecture, April 13, at the First Congregational Church in Berkeley. The conference was jointly sponsored by the Bureau of Church Building of the National Council of Churches and by the Northern California-Nevada Council of Churches.

Among outstanding program discussions was a conference on "Building for Contemporary Religious Life," with Mario Ciampi, Donald Powers Smith, and Anshen & Allen of the Northern California Chapter; Leslie Nichols, Coast Valley Chapter AIA, taking part.

PASADENA CHAPTER

John Lyon Reid, president of the California Council of Architects and William Glenn Balch, Vice-president of the Council, were the principal speakers at

PHOTO CREDITS: Moulin Studio, Front Cover, Page 8, 10, 11, 14, 17, 18, 22; Cal-Pictures, Page 12; Morley Baer, Page 15; Skelton Studios, Page 20 (top); Portola Studio, Page 20 (bottom); Oakland Tribune, Page 21; Morrison-Knudsen Co., Page 20 (top); Phil Fein Photo's, Page 25 (top); and John Black & Associates, Page 26.

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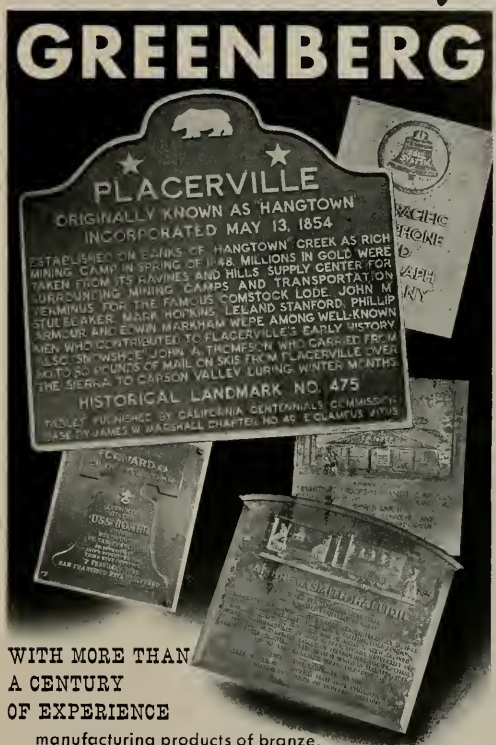

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the April meeting, giving a report of the recent Monterey Organizational Meeting and an outline of the Council's legislative program.

New Members: Jean Roth Driskel and "Dick" Leitch, Members; Roscoe Lynd Warren, Jr., Associate Member.

CALIFORNIA COUNCIL OF ARCHITECTS

John Lyon Reid, president, recently announced that the California State Chamber of Commerce has voted to support the California Senate Constitutional Amendment No. 6, which will be on the November ballot and would allow the State of California to employ private architects and engineers for use on state construction work.

The Los Angeles firm of Latta and Company has been retained by the Joint Architects-Engineers Steering Committee to handle a state-wide promotion campaign in favor of the proposition.

SOUTHWEST WASHINGTON CHAPTER

A new television series dealing with specific individual problems of design, including residential, churches, schools, urban, remodeling, will continue through April and into July, according to a recent announcement.

Architects scheduled to appear on these programs include: Leroy Anderson, Robert Parker, Marshall Perrow, Alan Liddle, Donald Seifert, Robert Wohleb, Robert Evans, Harry Berry, Robert Price, Edgar Mills, Lyle Sewdberg, Charles Pearson, Robert Olson, Walter Widmeyer, Donald Burr, Warren Brown, Louis Pedersen, and Earl Iverson.

Jim Brown, West Coast Promotional Manager for the National Lead Company hosted the architects at the Top of The Ocean, April 11th.

CALIFORNIA PROPOSES HIGH-LEVEL FIXED SPAN BRIDGE AT MARTINEZ

The California State Division of Highways has applied for a Department of the Army approval of Plans for the construction of a high-level fixed-span highway bridge across the easterly end of Carquinez Strait, California, according to Colonel John A. Graf, San Francisco District Army Engineer.

ENGINEERING FIRM

John J. Gould, engineer, recently announced the association of Henry J. Degenkolb and the formation of a partnership for the practice of civil engineering and structural engineering under the firm name of John J. Gould and H. J. Degenkolb, Consulting Engineers.

Offices will be maintained at 149 California street, San Francisco.

R. Gordon Dean will serve as Chief Engineer and Thomas D. Wosser will be the office engineer.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

MAN AND THE WINDS. By E. Albert De La Rue. Philosophical Library, Inc., 15 E. 40th St., New York 16 N. Y.

The winds have always greatly influenced the life of man and never more than today, when aviation, the development of backward countries and the prevention of soil erosion have become increasingly important. The author has traveled widely and gives a survey of winds all over the world, showing how man has used them, or has protected himself from them, or adapted his habitation to them. The book also shows the emotional appeal which has earned for the winds a large place in literature and how they have affected the course of history and the progress of civilization.

LATIN AMERICAN ARCHITECTURE. By Henry-Russell Hitchcock. The Museum of Modern Art, 11 W. 53rd St., New York 19. Price $6.50.

In the last decade Latin America has been the scene of one of the greatest building booms in history. The book is the result of a survey of this construction achievement by the author, one of America's leading historians of modern architecture, and a report on the most significant buidings he observed during a trip to Latin America. Forty six buildings are described in ten countries and Puerto Rico.

Latin American architecture excels in quantity and quality when compared to post-war construction in Europe, and rivals the best architecture in the United States. Of particular interest are the University Cities and public housing projects, extensive in scope and brilliant in design. Many large photographs with descriptive captions are included.

SUN AND SHADOW—The Philosophy of an Architect. By Marcel Breuer. Dodd, Mead & Co., 432 4th Ave., New York. Price $7.50.

The author, one of the leading modern architects and designers in the world today, has produced his first complete statement of his most important beliefs, in a series of chapters and in hundreds of dramatic photographs and drawings of his work. Sun and Shadow was designed by Alexey Brodovitch, and edited by Peter Blake.

The presentation of Breuer's work, from the smallest one-family house to the UNESCO Headquarters building in Paris, is handled in a way never tried before in an architectural publication; it is not presented in a chronological succession of buildings, but as a series of revolutionary ideas that have affected many things, from the design of chairs to the design of skyscrapers. The author's ideas are further elaborated in his own statments, which tie the book together, in a most interesting manner.

AIR CONDITIONING REFRIGERATING DATA BOOK —Design. The American Society of Refrigerating Engineers, 234 Fifth Street, New York 1. Price $10.00.

This volume is one of a continuing series of Data Books published by The American Society of Refrigerating Engineers, and is the ninth edition of the Design Volume. The book details the fundamental data and basic engineering information concerned with the theory and principles of the design of refrigeration and air conditioning equipment and systems. Supplementary is the Application Volume which covers the art and science of the practical applications of refrigeration to specific problems in the refrigeration and air conditioning fields. It contains many photographs and diagrams.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

How to insulate your home for electric heating. New comprehensive, well illustrated booklet; describes advantages of electric heating; various types of equipment (including wall and ceiling unit heaters, self contained fan types, radiant glass panel heaters, heating cables and panels of conductive rubber); various methods of installing insulation are detailed, as are the proper uses of vapor barriers; diagrams and photographs illustrate working procedures for floored and unfloored attics,

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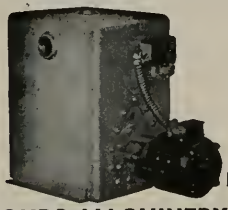

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Modern sheet copper practices. New 112-page illustrated manual (AIA File No. 12) edited especially for the architect, specification writer, sheet metal designer and worker; contains series of detail drawings in perspective, each with its own specifications. The individual specifications, when added to the general specifications at the beginning of the book, simplify the preparation of specifications; contains suggested practices for roofing, flashing, expansion joints, gutters, through-wall flashing, spires, domes; information on temper, gauge, expansion and contraction factors. Write for copy DEPT-A&E, The American Brass Co., Waterbury 20, Conn.

Air handling units. New, modernized, 40-page engineering manual is a reference guide for architects, engineers and air conditioning contractors; complete data on large air handling units (ceiling suspended or floor mounted) for commercial, industrial and residential heating and cooling; illustrates, dimensions, capacities, selection and application data; charts, tables, graphs detailing heat of moist air; selection of proper units, sizes; convenient specifications guide. Write for copy DEPT-A&E, Drayer-Hanson, Inc., 3301 Medford St., Los Angeles 33, Calif.

Fine Hardwoods Selectorama. Handy reference guide (AIA File 19-E-5) describes over 400 commerically available species; geographical sources, color, pattern, characteristics, common uses, availability, price range; woods cross referenced under names known in different localities and countries; 146 most popular types handsomely illustrated (38 in full color); physical properties data. Copy write DEPT-A&E, Fine Hardwood Ass'n, American Furniture Mart, 666 Lake Shore Drive, Chicago 11, Ill.

Lamp designers, lighting engineers. Technical information available in new brochure (AIA File No. 31-F-237) "Low Brightness—Curved Lens Panel," for lamp designers, lighting engineers, and architects; complete information on curved panel lens; brightness data, coefficients of utilization, formulas for calculating illumination levels and suggested specifications use; Write DEPT-A&E, Corning Glass Works, Corning, New York.

Walter Voss book on Masonry. Fundamentals of sound, watertight masonry covering the influence of mortar, masonry units, design, and workmanship on good masonry; 70 pages, 36 photographs and schematic illustrations; written especially for architects, masonry contractors, and engineering students. Write for copy DEPT-A&E, National Lime Ass'n, Washington 5, D. C.

Hinges for light construction. New brochure describes and illustrates a representative variety of the hinges available for such light construction as residences, motels, stores; also described and illustrated are items of forged iron builders and cabinet hardware; forged iron mail boxes, foot scrapers, letter slots. Free copy write DEPT-A&E, McKinney Mfg. Co., 1715 Liverpool Street, Pittsburgh 33, Pa.

The 3-R's and day-lighting. Special booklet (AIA File No. 10-F) prepared under direction of Howard F. Kingsbury, head of Pittsburgh Corning's Daylighting Research Center; spells out in simple, understandable language the highly involved subject of the classroom and its effect upon child development. Copy available, write Pittsburgh Corning Corpn, 1 Gateway Center, Pittsburgh 22, Pa.

Self energized remote control devices. New brochure describes remote control switching; low voltage relay method with built-in transformer; describes installations, instructions, uses and applications; special chart for information and specifications. Free copy write DEPT-A&E, Pyramid Instrument Corpn, Lynbrook, N. Y.

Solving modern room heat distribution problems. New 16-page bulletin describes and illustrates proper radiator installation for churches, hospitals, schools, offices, homes, institutions, and commercial buildings. Free copy write DEPT-A&E, Shaw-Perkins Mfg. Co., 201 E. Carson St., Pittsburgh 19, Pa.

ESTIMATOR'S GUIDE

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Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb	5.05
Asphalt roofing, 15-lbs	2.70
Asphalt roofing, 30-lbs	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	2.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl 3.59

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White—1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk $13.15

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ⅛-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼ Sel.	1/2x2 #1 Com.	3/8x2 #2 Com.	1/4x2 #3 Com.
Clear Qtd., White	$425	$405	$	$
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390 00
33/32 x 2¼ 2nd Grade	365.00
25/32 x 2¼ 2nd & Btr. Grade	375.00
25/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
1/8 in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
1/8 in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
1/8 in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
1/8 in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-S1S $135.00
½-inch, 4.0x8.0-S1S 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Besis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Besis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	Pr. per pkg.	Price to Painters per 100 lbs.	Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tucson, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-D400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(19)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10- 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw Icaom	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw Icaom	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%prom	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB 12½cv; 10cp	10cw	10cw	10cw	10cw	10cw	10cw	10cw Ica			10cw	10cw	10cw
		12½cv	11½ca	10cp; Ica	12½cv	10cp; Ica							
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cp	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	Ica	Ica	10cp; Ica	12½cv	10cp; Ica		Ica					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%prom				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

INDUSTRIAL BLDG, Los Angeles. Harry Teichner, owner. Brick industrial building, composition roofing, concrete floors, interior plaster, gas water heater, toilets, rotary roof ventilators, skylights, tapered steel girders, pipe columns, asphaltic paving, concrete loading dock, roll-up doors; 128x160 ft area—$75,000. ENGINEER: Jos. Halpern, Los Angeles. GENERAL CONTRACTOR: H. S. Scott, Los Angeles.

BOILER HOUSE: Ferry Bldg, San Francisco. Board of Harbor Commissioners, San Francisco, owner. Reinforced concrete and structural steel, metal lathing and furring, plywood, gypsum wallboard, corrugated asbestos metal doors, electrical work — $43,574. CHIEF ENGINEER: S. S. Gorman, San Francisco. GENERAL CONTRACTOR: Hart & Hynding, San Francisco.

GARAGE & OFFICE, South Gate, Los Angeles county. James C. Price, South Gate, owner. 1-Story frame and stucco garage and office building, composition roof, aluminum sash, overhead doors, concrete slab floors, fluorescent lighting, wall furnace, composition tile; 1200 sq. ft. in area. PLANS: Paul B. Clayton & Associates, Maywood.

LABORATORY, Palo Alto, Santa Clara county. Lockheed Aircraft Corpn, Burbank, owner. 2-Buildings on a 22 acre site in Stanford Industrial Park, Palo Alto, tilt-up concrete construction, parking facilities for 375 automobiles; 51,000 sq. ft. area in one building and 14,000 sq. ft. of area in other. ARCHITECT: Kenneth T. Thompson, AIA, Pacific Palisades. GENERAL CONTRACTOR: McNeil Constn Co, Los Angeles.

SWIMMING & WADING POOLS, North Sacramento. Arden Park Vista, Sacramento, owner. Gunite constructed with concrete terraces—$40,820. ARCHITECT: Clarence C. Cuff, Sacramento. GENERAL CONTRACTOR: Dennis Swimming Pools Inc., Sacramento.

INDUSTRIAL BLDG, South Gate, Los Angeles county. D. E. Rumbaugh and R. W. Stout, South Gate, owners. 1-Story rigid steel frame and corrugated iron exterior, corrugated iron roof, steel sash, sliding doors, concrete slab floor, attached frame stucco office building, 2-toilet rooms, concrete slab floor, interior plaster; 50x100 ft. of area. ENGINEER: Jack E. Spencer, South Gate. GENERAL CONTRACTOR: Dudley Steel Corpn, South Gate.

ELEMENTARY SCHOOL ADD'N, Cypress, Redding, Shasta county. Redding Elementary School District, Redding, owner. Frame and stucco addition of 3-classrooms, multipurpose room, kindergarten, kitchen, and toilet facilities—$152,568. ARCHITECT: J. Clarence Felciano, AIA, Santa Rosa. GENERAL CONTRACTOR: A. J. Murry Co, Yreka.

ELEMENTARY SCHOOL, Downeyville, Redding, Shasta county. Redding Elementary School District, Redding, owner. Frame and stucco addition of 6-classrooms, multi-purpose room, kindergarten, kitchen, toilet facilities—$218,976. ARCHITECT: Clayton Kantz, AIA, Redding. GENERAL CONTRACTOR: Singleton Co, Eureka.

ELEMENTARY SCHOOL, Parkside, San Mateo. San Mateo Elementary School District, San Mateo, owner. Addition of 12 classrooms, toilet rooms; frame and stucco construction — $212,760. ARCHITECT: Falk & Booth, San Francisco. GENERAL CONTRACTOR: Barnhart Const. Co., Santa Clara.

MARKET, Lucky Store, Hayward, Alameda County Oliver Rousseau Organization, Hayward, owner. 1-story reinforced concrete, tilt-up construction, structural steel columns—$176,683. ARCHITECT: A. E. Alexander, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

AUTO SALES & SERVICE, Alhambra, Los Angeles County. Ted R. Tapfer, Alhambra, owner. 1 and part 2-story concrete block auto sales and service building; composition roofing, plate glass and louvered sash, overhead door, concrete slab 1st floor, wood 2nd floor, toilet rooms, plumbing and electrical work; 4000 sq. ft. floor area—$25,000. ENGINEER: F. E. MacDonald, Jr., San Gabriel.

OFFICE BLDG., Remodel, Oroville, Butte County. Oroville Title Company, Oroville, owner. Remodel interior and exterior with addition of a brick and architectural metal front—$30,000. ARCHITECT: Thomas P. Dunlap, AIA, Chico. GENERAL CONTRACTOR: Hap Unfried, Oroville.

HIGH SCHOOL, Carson City, Nevada. Ormsby County High School District, Carson City, owner. Comprises administration facilities, 15 classrooms, multi-purpose room, gymnasium, kitchen, toilet rooms; reinforced concrete, glass block, wood roof, some structural steel—$396,000. ARCHITECT: Vhay & Grow, Reno. GENERAL CONTRACTOR: Service Station Engineering Co., Sacramento.

OFFICE-SALES, Warehouse, South San Francisco, San Mateo County. H. D. Lee Co., San Francisco, owner 1-story reinforced concrete tilt-up construction, wood roof; 30,000 sq. ft. area—$250,000. ARCHITECT: J. Francis Ward, AIA, San Francisco. GENERAL CONTRACTOR: Associated Construction & Engineering Company, South San Francisco.

MEDICAL OFFICE, West Covina. Dr. Mitchell E. Langner, Covina, owner. 1-story, concrete block medical office building; composition roofing, skylight, brick planter, steel sash, plate glass, concrete slab floor, forced air heating, 50-gallon water heater, toilet rooms; 1100 sq. ft. floor area. STRUCTURAL ENGINEER: K. A. Reeder, Altadena. GENERAL CONTRACTOR: C. P. Cassady, Inc., Arcadia.

MEDICAL BLDG, Van Nuys, Los Angeles county. Ricardo A. Pego, Pacoima, owner. Frame and stucco medical building, composition roofing, concrete slab, asphalt tile, vinyl tile and ceramic tile floors, wood cabinets, plaster walls and ceilings, plate glass entrance doors, louver windows, forced air unit, plumbing, electrical, asphalt paving. ARCHITECT: Eduardo Jose Samaniego, Los Angeles. GENERAL CONTRACTOR: Basulto Const Co, Los Angeles.

EL DORADO OFFICE BLDG, Oakland, Alameda county. Associated Investment Co., Berkeley, owner. 6-Story structural steel frame, reinforced concrete construction, aluminum sash; penthouse; 82,000 sq. ft. floor area; two first floors for auto parking—$2,000,000. ARCHITECT: Jee & Anderson, Berkeley. GENERAL CONTRACTOR: Bayshore Const Co, Oakland.

WATER SUPPLY SYSTEM, Hawthorne, Nevada. U. S. Navy District Public Works Officer, San Bruno, California, owner. Work consists of drilling well, equip with pump and pumphouse, construction of a 1,000,000 gal steel reservoir; new connections with existing earth covered concrete reservoir, installation of water mains, service.—$319,140. GENERAL CONTRACTOR: A&A Const. Co, Muskogee, Oklahoma.

SANCTUARY, Hawthorne. First Methodist Church of Hawthorne, owner. Frame and stucco, and concrete block sanctuary, composition rock roofing, laminated wood beams, concrete slab, asphalt tile and cork floors, air-floor heaters, steel sash, balcony, general offices, toilet facilities, electrical work; 56x119 ft. ARCHITECT: Culver Heaton, Pasadena. GENERAL CONTRACTOR: Samuelson Bros, Glendale.

STUDENT UNION, Napa College, Napa. Napa High School and Junior College District, Napa, owner. 1-Story frame, stucco, concrete and asphalt tile floors; 7,000 sq. ft. floor area; general purpose room, store, fountain, offices, toilets—$115,030. ARCHITECT: Corelett & Spackman, San Francisco. GENERAL CONTRACTOR: J. H. Vienop Co, Napa.

STORE, Corona Del Mar, Orange county. Morrie Smith, Corona Del Mar, owner. 2-Story, 7-unit, concrete block store building; offices on 2nd floor; built-up composition roofing, slump stone veneer and wood framing, plate glass windows set in wood frames, concrete slab first floor, wood 2nd floor; heating and air conditioning, plumbing, electrical, toilet facil-

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ities; 19,500 sq. ft. floor area. ARCHITECT: John A. Nordbak, Downey. GENERAL CONTRACTOR: Austin Sturtevant.

SOCIAL HALL, Arden District near Sacramento. Arden Christian Church, Sacramento, owner. 1-Story frame and stucco construction Social Hall and classroom—$50,000. ARCHITECT: Herbert E. Goodpastor, Sacramento. GENERAL CONTRACTOR: Chas F. Unger, Sacramento.

AUDITORIUM, Palms Junior High School, Los Angeles. Los Angeles Board of Education, Los Angeles, owner. Reinforced concrete auditorium—$416,000. ARCHITECT: Risley & Gould, Los Angeles. GENERAL CONTRACTOR: E. C. Nesser, Los Angeles.

SHASTA COLLEGE ADD'N, Redding, Shasta county. Shasta College District, Redding, owner. Frame and stucco construction of a business education classrooms addition to existing college buildings —$195,999. ARCHITECT: Charles F. Dean, Sacramento. GENERAL CONTRACTOR: Fred J. Chapek, Sacramento.

BAKERY & STORE, Colma, San Mateo county. Francois Bakery, San Mateo, owner. 1-Story reinforced concrete, tilt-up construction, laminated beams wood roof; 7,000 sq. ft. area—$45,750. DRAFTSMAN: Robert M. Sherman, San Mateo. GENERAL CONTRACTOR: Lippi & Erickson, Redwood City.

DRIVE-IN RESTAURANT, Lakewood. Fasig's Jackpot, Downey, owner. Frame, stucco and brick veneer drive-in restaurant in Lakewood; 4,860 sq. ft. area; 4-units including hamburger, doughnut and ice cream dispensing facilities and dining rooms, composition mopped floor, concrete slab and linoleum, plate glass in white metal frames, pass-out assembly windows, laminated plaster counter top, evaporative coolers, unit heat, slimline lighting, cantilouvre sign, 20,000 sq. ft. black-top paving and concrete walks. ENGINEER: William T. Corum, Consulting Engineer, Compton.

INSURANCE OFFICE, Fresno. Pacific Employers Insurance Co., Fresno, owner. 1-Story brick, frame and structural steel construction — $106,750. ARCHITECT: Horn & Mortland, Fresno. GENERAL CONTRACTOR: R. G. Fisher, Fresno.

GARAGE, Los Angeles. Ravenswood Apartments, Los Angeles, owner. Frame and wood siding garage with space for 24 automobiles; wood shingle roof, steel pipe columns, asphalt paving, reinforced concrete retaining walls. ARCHITECT: David Freedman, Beverly Hills. GENERAL CONTRACTOR: Diller-Kalsman, Los Angeles.

PLACER HILLS ELEMENTARY SCHOOL ADD'N, Applegate, Placer county. Placer Hills Elementary School District, Applegate, owner. Frame and stucco construction of addition to existing structure consisting of 2-classrooms, kindergarten, multi-purpose, kitchen, toilet rooms—$116,597. ARCHITECT: Gordon Stafford, Sacramento. GENERAL CONTRACTOR: H. J. Harlow & Sons, Sacramento.

COUNTRY CLUB ADD'N, Montebello, Los Angeles county. Montebello Country Club, Montebello, owner. Addition of a locker room, 42x73 ft., frame and stucco construction, tile roofing, concrete slab floor, wood and ceramic tile flooring, interior stucco, steel sash, overhead aluminum doors, lounge area, toilet rooms, lockers and showers, heating and ventilating—$49,803. ARCHITECT: Taylor, Warren, Nishimoto & Conner, Pasadena.

REST HOME, Modesto, Stanislaus county. Guy C. Outland, Modesto, owner. 1 story, 30 bed, frame and stucco construction—$52,800. ARCHITECT: John W. Bomberger, Modesto. GENERAL CONTRACTOR: Hans Pearson, Modesto.

MOTEL, Los Angeles. Gelff, Natkes & Gelff, Los Angeles, owner. 18-unit, frame and stucco motel building; 97x120 ft., composition and gravel roof, asphalt tile and ceramic tile floors, interior plaster, gas wall furnaces, two central gas water heaters, tile baths and stall showers, sliding wardrobe doors, insulation, asphaltic concrete paving, louvered and fixed glass sash—$38,500. GENERAL CONTRACTOR: Fairway Constrn Co, Beverly Hills.

CHURCH, Avanal, Kings county. Community Presbyterian Church of Avenal, owner. 1 story modern construction—$58,000. ARCHITECT: Lloyd Fletcher, Visalia GENERAL CONTRACTOR: Remco Const Co, Avanal.

LABOR CAMP, Merced. Filice & Perrelli Canning Co., Inc., Merced, owner. Concrete block and frame construction: 12 units. ARCHITECT: Walter Wagner & Partners, Merced. GENERAL CONTRACTOR: Imberri Const Co, Merced.

RESEARCH LABORATORY, Emeryville, Alameda county. Shell Development Co., Emeryville, owner. 1-Story, with mezzanine, general interior and exterior remodel and addition of a new building 16x54 ft.; concrete block, porcelain enamel, buried tanks and piping—$700,000. GENERAL CONTRACTOR: Swinerton & Walberg, Oakland.

COMMUNITY HOSPITAL: El Centro, Imperial county. El Centro City, El Centro, owner. Completion of an existing 44-bed hospital in El Centro; work includes hardware, installation, concrete, sheet metal, plastering, acoustic tile, floor covering, ceramic veneer, air conditioning—$392,000. ARCHITECT: Franck C. Hude, El Centro. GENERAL CONTRACTOR: Fred C. Smith, Holtville.

HIGH SCHOOL, Novato, Marin county. Novato Unified School District. Novato, owner. Work includes administration building, 6-classrooms, homemaking, 3-science, 2-business education, library, music, arts and crafts, speech, cafeteria, boys and girls locker and shower rooms, gymnasium, 2-shop buildings and toilets; 48,000 sq. ft. of area, brick and wood trim, asbestos cement panels, gymnasium steel frame—$931,218. ARCHITECT: John Lyon Reid & Partners, San Francisco. GENERAL CONTRACTOR: B. & R. Const Co, San Francisco.

HOME ECONOMICS & EXHIBIT BLDG, 12th District Fairgrounds, Ukiah, Mendocino county. State of California, Sacramento, owner. 1-Story assembly building, with lean-to additions for kitchen and toilets; prefabricated rigid steel frame, wood roof, asbestos shingles, interior walls plywood and gypsum board, exposed plank and gypsum board ceilings, wood sash, concrete floors, grading, mechanical work: 3,350 sq. ft. floor area—$46,450. GENERAL CONTRACTOR: Rothschild, Raffin & Weirick, San Francisco.

THEATRE, Livermore, Alameda county. Roy Copper Theatre, San Francisco, owner. 1-Story, concrete walls, laminated wood arches, air conditioning, seating capacity of 800. GENERAL CONTRACTOR: Alfred J. Hooper Const Co, Oakland.

DOCTOR'S OFFICE, Monterey. Drs. Bates & Grunwalt, Monterey, owners. Frame addition to existing building, plaster interior, shingle roof.—$15,523. ARCHITECT: Butner, Hol, & Waterman, Monterey. GENERAL CONTRACTOR: Jake D. Huizenga, Seaside.

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IN THE NEWS

ARCHITECT SELECTED

Architect Frank Lloyd Wright has been commissioned by the Lenkurt Electric Company of San Carlos to design an Administration and Engineers Building to be built in San Carlos.

The new facilities will contain 90,000 sq. ft. of floor area.

RAY BLOOMBERG NAMED INFORMATION DIRECTOR

Ray Bloomberg has been appointed Director of Information for the Western Red Cedar Lumber Association, according to a recent announcement by William Hulbert, Jr., chairman of the association's Trade Promotion Committee.

Bloomberg will serve with Arthur I. Ellsworth, secretary-manager, in the association's Seattle offices.

PHILIP L. PAULSEN WITH SISALKRAFT

Philip L. Paulsen has been promoted to the San Francisco area representative for the American Sisalkraft Corpn., and in his new capacity is handling the full line of waterproof reinforced papers manufactured by American Sisalkraft.

Paulsen formerly worked in the Sacramento Valley area and is well known in the building material field.

ARCHITECT JOINS SACRAMENTO FIRM

Leonard Starks, senior member of the Architectural firm of Starks and Jozens, Sacramento, announced recently the admission of Daniel J. Nacht to the firm.

Nacht is a former member of the faculty at the University of Illinois and for many years was with the firm of Skidmore, Owings and Merrill. He is a registered architect in California and Illinois.

The new firm will be known as Starks, Jozens and Nacht, Architects.

JOHNSON SERVICE CO. COMMON STOCK SALE

In the February issue of ARCHITECT & ENGINEER, an article appeared on page 31 relative to an expansion program of Johnson Service Company to be financed by the sale of a limited number of shares of common stock in the company.

Elworthy & Company, Investment Securities, 111 Sutter Street, San Francisco, has recommended the common stock of Johnson Service Company as an investment and so advertised on page 27 of the February issue of ARCHITECT & ENGINEER.

The shares recommended and advertised were not a new issue of stock, but shares presently outstanding.

ARCHITECTS FORM NEW PARTNERSHIP

Architects Andrew P. Anderson, AIA, and Raymond J. Browder, AIA, have formed a partnership for the practice of architecture to be known as Anderson & Browder, Architects.

Offices of the new firm are located at 5335 College Avenue, Oakland, California.

SAN ANDREAS NEW CHURCH

Architect Henry N. Silvestri of Hollywood, is completing drawings for the Roman Catholic Archbishop of San Francisco, for construction of a new 26 seat Church to be built in San Andreas, Calaveras county.

The Church will contain 4,250 sq. ft. of floor area, and will be of frame and stucco construction with brick veneer, mission tile roof, and oil fired forced air heating.

STRUCTURAL ENGINEER SELECTED

H. M. Engle, Structural Engineer of San Rafael, has been selected by Purity Stores, Ltd., of San Francisco, to design a new office, warehouse and truck shop building to be built in the Millsdale Industrial district of Burlingame.

The 1-story building will cost an estimated $1,500,000.

DAN W. ORAM APPOINTED SALES DIRECTOR KLEMP

Dan W. Oram has been appointed Executive Director of Sales of the Klemp Metal Grating Corpn. of Chicago, according to a recent announcement.

Oram was recently associated with Kerrigan Iron Works, Inc., as head of the Market Development Division, and was formerly president of the Board of Com-

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WOODWORK INSTITUTE MOVES TO FRESNO

As a part of the continuing growth of the Woodwork Institute of California, the Board of Directors recently announced an expanded and accelerated program, which included moving the central administrative offices to Fresno.

The new offices will be under the direction of Bernard B. Barber, Jr., recently named Secretary of the W.I.C., at 1833 Broadway.

Area directors named to serve with Byron Taylor, president of W.I.C. during the ensuing year include: Stanley Gustafson, Sierra Mill & Lumber Co., Sacramento; E. F. Atkinson, Clinton Mill & Mfg. Co., San Francisco; J. L. Pierce, Pacific Manufacturing Co., Santa Clara; J. R. Little, Union Planing Mill, Stockton; Tom A. Work, Jr., Work Mill & Cabinet Co., Monterey; E. G. Ludwick, Santa Barbara Mill & Lumber Co., Santa Barbara; F. Rex Sporleder, Hollenbeck-Bush Planing Mill, Fresno; Harry M. Libby, John W. Koehl & Son, Adolpy Warvarosky, Los Angeles Millwork Co., and R. L. Young, Pacific Lumber Dealers Supply, Inc. of Los Angeles; and W. Perry Acuff, Western Lumber Co. of San Diego.

MEDICAL-DENTAL BUILDING

Architects Beland & Gianelli, Napa, are completing working drawings for construction of a new Medical-Dental building to be built in Napa for the Napa Medical & Dental Associates.

The building will comprise 10 suites of offices; 1-story frame and stucco and concrete block construction with aluminum sash, and vinyl tile floors; 15,000 sq. ft. of floor area. Cost will be approximately $200,000.

SCHOOL PLANT PLANNING WORKSHOP AT COLORADO

The Department of Architecture and Architectural Engineering of the University of Colorado, Boulder, under the auspices of the College of Education, announced the fourth annual School Plant Planning Workshop will be held on the Boulder campus from June 18 through July 20.

The Workshop is planned to serve school administrators, members of School Boards, practising Architects and others interested in the design and building of elementary, junior and senior high schools. Visiting lecturers will supplement the Architecture faculty and field trips have been arranged to schools completed and under construction in the Boulder-Denver area.

Anyone interested in attending this Workshop can obtain complete information from Prof. Thomas L. Hansen, A. I. A., Head, Department of Architecture and Architectural Engineering, University of Colorado, Boulder.

ARCHITECT CHANGES FIRM NAME

Nelson J. Morrison, A.I.A. Architect of Tacoma, Washington, recently announced the changing of the name of Mock & Morrison, Architects, to the name of Nelson J. Morrison, Architect, A.I.A. with general offices at 227 Perkins Building, Tacoma 2, Washington.

SCHOOL BONDS ARE APPROVED

Voters of the Marysville Elementary School District have approved the issuance and sale of $600,000 in school bonds with the proceeds from their sale to be used in the construction of a new elementary school building in Marysville.

The new facilities will include 20-classrooms, 6 special classrooms, multi-purpose room, kitchen, and toilet rooms; frame and stucco construction.

Architect Herbert E. Goodpastor of Sacramento is preparing drawings.

THOMAS W. BURTT IS NAMED VICE PRESIDENT

Thomas W. Burtt, for 25 years with the Standard Oil Company of California has been appointed vice-president in charge of Engineering and Construction for the Holmes & Narver, Inc., Los Angeles organization of Engineers and constructors.

Burtt's new activities will include direction of all engineering and construction projects of the company including industrial and petro-chemical assignments, domestic and foreign. He has been serving Holmes & Narver, Inc., as Director of Engineering since 1952 and is a member of the Board of Directors.

WESTERN STRUCTURAL TILE INSTITUTE

Two western tile manufacturers have announced formation of the Western Structural Tile Institute as a move toward standardization of their products. The two companies, Kraftile Company of Niles, California, and the Washington Brick and Lime Co., of Spokane, Washington,

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Washington Brick and Lime Co. is completing construction of a new tile plant at Spokane, and Kraftile Co., completed extensive expansion of its Niles, California, plant just recently.

A chart of standard nominal 6"x12" shapes, plus an additional number of shapes in the case of each manufacturer to meet specific regional needs, is now available from the Western Structural Tile Institute, with "Development of specifications and grading rules now in process which will be standard in Western industry," according to C. H. Kraft, president of Kraftile Company.

"The Facing Tile Institute has done a splendid job in the eastern region, and we expect to do the same general job for western builders," reported Jack E. Colwell, vice-president of the Washington Brick and Lime Company.

ROBERT P. REED SALES MANAGER FOR ARCADIA

Robert P. Reed has been named Southern California sales manager by Arcadia Metal Products, according to D. P. Johnson, national sales manager.

Reed is a graduate from Pomona College and the graduate school of business at Stanford University, where he received a Master of Business Administration degree in 1948.

COUNTRY CLUB FOR RIDGECREST

The architectural firm of Kenney and Cullimore of Bakersfield are preparing plans and specifications for conversion of 125 acres of desert land at Ridgecrest, into a gigantic recreation area to serve the community and personnel of the adjacent military installations.

Development plans include a swimming pool, golf course, bass-pool, tennis courts and horseback riding facilities. Site of the project is in the foothills of Lava Mountain overlooking Ridgecrest and China Lake.

Designed in a contemporary, Western mode at its best, the swank Club will cost an estimated $1,000,000.

CRIMINAL AND LEGAL BLDG.

Architect Frank C. Treseder of San Jose, is completing preliminary drawings for construction of a 2-story office wing and a 1-story courtroom wing combination legal and criminal building. The new building will be built in San Jose's new Civic Center. Estimated cost of the work is $500,000.

CHURCH ADDITION

Architect Robert M. King of Pomona, is completing drawings for construction of a chapel and classroom addition to the existing Pilgrim Congregational Church in Pomona.

NEW ROD MILL SITE ACQUIRED

The Titan Metal Manufacturing Company of Bellefonte, Pa., has purchased a 40 acre tract near Newark in Alameda County and will soon start construction of a new brass rod mill.

Estimated cost of the manufacturing plant is $1,000,000.

BENICIA-MARTINEZ FERRY BOAT AWARD

The Pacific Coast Engineering Company of Alameda has been awarded a contract of $616,500 by the California Department of Public Works to construct a vehicular and passenger ferry boat to operate between Benicia and Martinez, on the Sacramento River.

The new ferry will have a carrying capacity of 40 autos and 50 passengers.

AUTOMOBILE DISPLAY AND SALES OFFICES

Architect Theodore Criley, Jr., of Claremont, and Arthur L. Miller & Associates of Pomona are completing drawings for construction of a Cadillac and Pontiac automobile agency building to be built in Pomona.

Construction includes a 2-story concrete block and reinforced concrete building, extensive plate glass, colored slab floors, winter and summer air conditioning, composition roofing, inter-com system, toilet facilities, ceramic tile, freight elevators equipped to handle automobiles,

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show room and lighting, 60-foot tower with neon sign, and the building will contain 75,000 sq. ft. of area.

NEW CHURCH SOCIAL HALL

Architect G. N. Hilburn of Modesto is completing drawings for construction of a new Church and Social Hall to be built in the City of Modesto for the Greek Orthodox Church.

The concrete block, laminated wood arch and wood roof building will cost an estimated $200,000.

NEW ELKS CLUB FOR RIVERSIDE

Architect Herman O. Ruhnau of Riverside is completing drawings for construction of a one-story reinforced brick building for the Riverside Chapter of the Elks Lodge.

The project will contain 22,000 sq. ft. of floor area, composition roofing, metal sash, aluminum plate glass front, interior plaster and exposed brick, acoustical ceilings, slab and resilient tile floors, winter and summer air conditioning, kitchen facilities, dining room and facilities.

Estimated cost of the work is $400,000.

VETERANS MEMORIAL

Architect J. Clarence Felciano of Santa Rosa has completed preliminary drawings for construction of a Veterans' Memorial Building to be built in the City of Petaluma by the County of Sonoma.

The memorial building will be of one story construction, reinforced concrete and will provide facilities for an auditorium, meeting rooms, recreation rooms, banquet rooms and facilities and a kitchen.

Estimated cost of the project is $450,000.

STUDENT CENTER

The architectural firm of Taylor, Warren, Nishimoto & Conner of Fullerton is completing plans for construction of a precast one story Student Center to be built on the campus of the Fullerton Junior College.

The building will contain a lounge, offices, toilet facilities, dining room, kitchen; will contain about 10,880 sq. ft. of floor area and will cost an estimated $165,000.

NEW CHURCH AT STOCKTON

Architect Carlton A. Steiner of Berkeley has been commissioned by the Central Methodist Church of Stockton to draft plans and specifications for construction of a new church at Miner and San Joaquin Streets in Stockton.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

GOOFING AGAIN

One of the most startling aspects of the demand for federal funds for financing school construction, and remember "federal funds" are in reality monies collected from you in the form of taxes, is its defiance of the law of gravity and reasoning.

The recent nation-wide cry for federal money was launched on the wings of a powerful statistic: At present construction rates, the nation would have a shortage of 476,000 classrooms by 1959.

There seemed to be no reason to doubt the figure, for it was issued by the U.S. Office of Education, thus the campaign for more classrooms took off with a roar that rocked every American home harboring school age children.

Then Mrs. Oveta Culp Hobby, Secretary of Health, Education and Welfare, snipped off some of the "statistic's" flying wing by declaring the figure was incorrect. Her considered estimate was that the shortage would be but 176,000 classrooms by 1959.

It soon developed that both estimates had been based upon reports of various state departments of education. Interested people began asking what definition of need had been used.

This question brought forth the amazing disclosure that nobody had defined need.

Did it mean schoolrooms without which pupils couldn't go to school? Did it mean schoolrooms it would be nice to have? Did it mean replacement of less desirable rooms? Did it mean schoolrooms needed to establish a perfect system?

There was no answer.

Trying to figure out what the needs actually were on the basis of the varied state reports without some basic point of consideration would be like trying to run a bank without a bookkeeping system.

So, the remaining portion of the "statistic" wing, following the unceremonious clipping by Mrs. Hobby, on the need for schoolrooms by 1959, seems to be floating over the nation in a confused conversational level without proper explanation or justification of basic fact.

Additional schoolrooms will be needed by 1959 and funds will be needed for their construction; however, the problem should be faced on some sound, logical basis.

* * *

BUILDING FOR ECONOMY

In this day of ever increasing building costs, it is particularly important that buildings be designed to best serve their functional purpose and at the same time present a minimum of maintenance need throughout the life of the building. It is very obvious that structures of civic importance, such as Class "A" office buildings, will require and deserve a careful architectural consideration in the matter of interior and exterior maintenance and the use of material which may vary somewhat from that considered for the average institutional or warehouse buildings. The finish or facing of civic buildings, if properly selected for its impervious and permanent qualities, will most certainly pay for itself during the life of the structure in reduced maintenance expense.

The architectural excellence and dignified appearance of Civic Centers in West Coast cities have been obtained by thoughtful use of building materials which impart dignity and permanent beauty.

It is to be hoped that those responsible for the future development of Civic and State and Federal buildings will continue to maintain this high standard of excellence and will not succumb to pressures of expediency that suggest the use of cheaper finishes to accomplish lower first cost but that result in impairing the beauty and architectural standards of our communities, and ultimately result in much greater expense in maintainance than is justified by the initial saving.

* * *

FREEDOM PAYS OFF

American productivity is two and a half times higher than in Soviet Russia. It may be even higher, actually, the Soviets themselves have admitted as much.

This admission came from Prof. P. Khomrov writing in Pravda on March 21. He offered some consolation to Soviet readers, however, saying that the gap is being narrowed.

The US Department of Labor, noting this, reports that any narrowing of the gap must have taken place before 1937, because in that year labor productivity in Soviet industry reached 40.5 per cent of that in the United States, about the same figure quoted by Prof. Khomrov.

Why is America consistently ahead in productivity?

The answer lies deep in our economic and political system—the answer is Freedom, something the Soviets have never tried. Freedom in which to live and work. Freedom for individuals to make the most of economic opportunities. And the Freedom which permits human incentives to work at their best.

These incentives include the profits and wages which reward business and labor, and a high standard of living, which rewards everybody.

We want to call attention to another important incentive, the high sense of responsibility of modern employers toward their employees in terms of recognition and appreciation. Under our economic system, labor and management can be, and are, genuine partners, contributing jointly to the productive effort on a voluntary basis.

Pinched inside a space 11½ inches deep–

Steel ductwork stands rigid air-conditioning test

The 25-story Equitable Building is San Francisco's newest skyscraper and the city's first office building to be completely air-conditioned. The Scott Nelson Company, Mechanical Contractors, had a job on their hands fitting a duct shape in the 11½-inch furred ceiling space. The problem was to fabricate ductwork flat and narrow, yet rigid enough to withstand constant vibration and pulsation. Adding frame reinforcement to the duct was only part of the answer. The rest depended on the selection of the right metal sheet.

The job required metal properly ductile to form sharply angled, tight seams; yet rigid enough to prevent seams from cracking or opening under the stress of high velocity airflow. The Scott Nelson Company selected steel . . . USS Galvanized Steel Sheets for the job . . . and report the USS sheets did a perfect job.

A unique feature of the Equitable Building's air-conditioning is 1,180 of these air blending units. There is a blender installed in every perimeter office. The units are connected to the central duct system and they act as independent thermostats delivering conditioned air according to an individual's wants.

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NEWS and COMMENT ON ART

M. H. DeYOUNG MEMORIAL MUSEUM

The M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil has announced the following schedule of exhibits and special events for May.

EXHIBITIONS: Paintings by Roberto Montenegro; Oils and Watercolors by Roger Barr; Paintings by Fritz Rauh; Ceramics in House and Garden, this is the 9th Annual exhibition of the Association of San Francisco Potters; and Creative Textiles by Jack Lenor Larsen.

SPECIAL EVENTS: Charles Lindstrom, director of education, gave three illustrated lectures on the newly acquired paintings in the Roscoe and Margaret Oakes Collection, Sunday afternoon at 3 o'clock, May 6-20-27. Classes in Art Enjoyment for adults will include Painting for Pleasure, Exercises in Perception, Saturday morning, 10:30; Painting Workshop For Amateurs, painting from the model and still life motifs for the practice of observation and appreciation, Saturday and Thursday afternoons from 1:30 to 4:00. Seminar in the History of Art, informal discussions illustrated by lantern slides, reproductions and original works, Thursday morning from 10:30 to 11:30; and for the Children are classes in Picture Making, Saturday mornings 10:15 to 11:30; Art and Nature, children 9-11, Wednesdays 3:30 to 4:30; and the Art Club, students 12-15 years old, Thursdays 3:30 to 4:30. All classes are free of charge.

Free automobile parking area is provided and the Museum is open daily 10 a.m. to 5 p.m. No admission charge.

J. A. MORRIS APPOINTED CHIEF CURATOR OF MUSEUM

The Trustees and Director of the San Francisco Museum of Art, War Memorial Building, Civic Center, recently announced the appointment of J. A. Morris as Chief Curator of the Museum.

Mr. Morris, until recently, was Curator of the Vancouver Art Gallery, Vancouver, B. C.

CALIFORNIA SCHOOL OF FINE ARTS ANNOUNCES SCHOLARSHIP

The California School of Fine Arts, 800 Chestnut Street, San Francisco, announces its annual Scholarship Competition for the school year 1956-1957.

These scholarships entitle the winners to full-time free tuition in the fields of painting, sculpture, graphic arts, design for commerce and photography. In addition, the Agnes Brandenstein Memorial Scholarship is awarded to a student with previous experience in ceramics for advanced work in this field, and students with previous experience in photography, who wish to major in film, are eligible to apply for the Frank Stauffacher Scholarship.

The scholarship competitions are open to all students 18 years of age or over who have graduated from high school, junior college, or are transferring from other colleges.

The California School of Fine Arts also offers a limited number of working scholarships which provide free tuition in exchange for one half-hour's work per week per unit of study. Applications may be made by writing Registrar, California School of Fine Arts, 800 Chestnut Street, San Francisco, California.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, announces the showing of the Fifteenth Annual Pacific Coast Ceramic Exhibition and Sale of Sculpture and Pottery this month, and continuing through June 20.

The Ceramics selected for viewing and chosen for prize awards have been chosen by a jury composed of Harry Crotty, Ernie Kim, Dr. Elizabeth Moses, Hal Rieger, Rudolph Schaeffer and Beatrice Judd Ryan.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is offering the following schedule of exhibits and events for this month:

EXHIBITS: Paintings by Ynez Johnston; Early San Francisco Theater Posters, from the collection of James H. Schwabacher; The San Francisco Fire—a group of photographs by Arnold Genthe; Wash Drawings by Teruko Yokoi, showing familiar scenes of San Francisco; Contemporary Posters by Williamson Mayo; Paintings from Haiti; Treasurers of the Jacquemart Andre Museum of Paris, which is an exhibit comprising 50 masterpieces of European painting and sculpture from the Renaissance to the eighteenth century, and is being sponsored by the Patrons of Art and Music. Paintings by Max Band, and Jewelry and Ceremonial Objects by Victor Reis, sponsored by the Bay Area chapters of Hadassah.

EDUCATIONAL ACTIVITIES: Include Painting Classes for children, 6-14, each Saturday morning, 10 o'clock.

THE ACHENBACH FOUNDATION FOR GRAPHIC ARTS

Prints by Stanley William Hayter and Helen Phillips are being shown at the Museum; while on Loan

Exhibition at the San Francisco Public Library is the Annual Wit and Humor and an exhibition of Drawing and Sketches by James Daugherty, representing progressive steps in the illustration of a book.

ORGAN RECITAL each Saturday and Sunday afternoon at 3 o'clock.

The Museum is open Daily. Admission Free.

NEW ART CLASS AT DE YOUNG MUSEUM

A new art class for adult beginners entitled "Painting for Pleasure, Exercises in Perception" will be given by Charles Lindstrom at the M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco, Saturday morning at 10:30 and on Wednesday afternoons at 2 o'clock.

Especially designed for the adult who thinks "He can't draw a straight line", the course offers an opportunity by learning to paint, to develop a more active enjoyment of art and all visual experience.

The classes are free of charge, as are others held at the deYoung Museum for both adults and children.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building Civic Center, under the direction of Grace L. McCann Morley, has arranged a special group of exhibitions and events for the month including the following:

EXHIBITS: American Abstract Artists; Pacific Coast Art—an exhibition of United States' representation at the Third Biennial of Sao Paulo, 1955; Paintings by Bedri Rahmi Eyuboglu of Turkey; and the 75th Annual Painting and Sculpture Exhibition of the San Francisco Art Association.

SPECIAL EVENTS: Concerts and programs, lecture tours each Sunday afternoon at 3 o'clock, Wednesday Evening Discussions on Art at 8:30, the Art Library, Rental Gallery, and Bookshop.

MUSEUM ACTIVITIES: Adventure in Drawing and Painting include the Sketch Club and the Painting Class; Studio-Art for the Layman, a course to awaken and develop inherent artistic potentialities of the layman, each Tuesday morning at 10 o'clock; and Children's Classes each Saturday morning from 10 to 11 for children from 6-14 with work in charcoal, paint, clay, or paper mache.

The Museum is open daily and each weekday night until 10 o'clock.

UNITED STATES ART EXHIBITION FOR SAO PAULO, BRAZIL, SHOWN.

The selection of Pacific Coast art which represented the United States' contribution to the Third Biennial of Sao Paulo, Brazil, is being shown to the public at the San Francisco Museum of Art, Civic Center, War Memorial Building.

Following in the footsteps of the famous Venice Biennials founded in 1895, the Sao Paulo Biennial was started six years ago to survey contemporary art developments throughout the world. The United States' participation in the two exhibitions, held in 1951 and 1953, was organized by the Museum of Modern Art, New York. The first furnished a panoramic view of art in that country and the second afforded a close-up of dominant tendencies as represented by fifteen artists.

The San Francisco Museum of Art was invited to organize the third group of paintings from the United States to be shown in Sao Paulo in 1955. The Museum was proud to accept the invitation and with the assistance of the Directors and Staffs of the Los Angeles County Museum, the Seattle Art Museum and the Portland Museum of Art, brought together a distinguished group of approximately 100 works of art to represent contemporary trends in the Pacific Coast states.

Dr. Grace L. McCann Morley, Director of the San Francisco Museum of Art, served as Commissioner and went to Brazil to install the United States' section in the Pavilion of Nations in Sao Paulo. The exhibition was very well received in Brazil and a San Francisco painter, Ralph Du Casse, received a major purchase prize for his painting **The Viking.** After closing in Sao Paulo the exhibition was shown in Rio de Janeiro before its return here.

The entire United States section of the exhibition will be shown at the San Francisco Museum of Art and then a selection of it will tour other American museums.

EUROPEAN MASTERPIECES ADDED TO OAKS COLLECTION AT deYOUNG

The M. H. DeYoung Memorial Museum, San Francisco, announces the addition of eight masterpieces of European painting to the Roscoe and Margaret Oaks Collection, one of the richest private gifts to museum goers in the history of the American West. The paintings are outstanding examples of the great schools of Dutch, Flemish, French, and English art of the 17th, 18th and early 19th centuries.

Of signal importance are two signed and dated portraits by Rembrandt (1606-1669), the greatest of the Dutch masters and one of the supreme artists in the entire history of painting: an early work "Joris de Caullery" painted at the height of Rembrandt's success and acclaim as the foremost portrait painter of Amsterdam and "Self Portrait of the Artist Sketching" done thirty years later in 1652 at the time of his greatest achievement as a painter when he no longer sought public acclaim, but had turned "inward" to express deeper observations and true human values with a freedom of brush work never before dared.

CORPORATE SHIELD design detail

HOME SAVINGS AND LOAN COMPANY

BEVERLY HILLS, CALIFORNIA

Millard Sheets, Muralist

A startling black-base glaze ceramic veneer combined with a gold fleck overlay, enhances the extraordinary entrance of the newly completed $2,000,000 Home Savings and Loan Company headquarters building in Beverly Hills. The novel corporate shield and the company initials and name, are also uniquely treated in handmade ceramic veneer as an interesting and attractive decoration on the front elevation.

On either side of the building entrance are large bronze figures of a father and son, and mother and daughter groups created by the famous sculptor Renzo Fenci of Santa Barbara, exemplifying the timelessness and indestructibility of the American family and home.

Newly completed headquarters at 9245 Wilshire Boulevard

These figures were cast in Florence, Italy, by Bruno Bearzi, internationally known bronze caster.

On the far right front of the building is a cast gold and black ceramic veneer company shield and the outside front on either side of the entryway has panels "H. S. & L." in gold on handmade ceramic veneer.

Ceramic engineers worked on this project with Millard Sheets, noted artist and muralist, who originated and supervised the design, color scheme and artwork. Artist Sheets sought to create a "timeless" building with the clean, classical lines and the rich designs reminiscent of early Greek architecture, and approximately 1,500 square feet of terra cotta was used in the design treatment.

In addition the exterior is Roman travertine and imported Italian marble molding topped by Italian glass tesserae mosaic.

The main room of the building is two stories high and of circular design with the curvilinear wall of the lobby outlining a second floor balcony used for executive offices and the lower floor providing every modern facility for the functional use of a large savings and loan institution.

Detail of building wall

ENTRANCE close-up showing colorful mural constructed over doorway

POLICE FACILITIES BUILDING

Los Angeles, California

NEWEST ADDITION TO THE CIVIC CENTER

J. E. STANTON, A.I.A.
Architect

WELTON BECKET, F.A.I.A.
and Associates

J. E. STANTON, A.I.A.
Associated Architects

The nation's finest and probably the first functionally designed Police Administration Building was recently completed and opened for public use in Los Angeles.

Located in the downtown civic center, the eight-

story structure designed by Welton Becket, F.A.I.A., and Associates, and J. E. Stanton, A.I.A., associated architects, represents an approach to the physical problem of police administration that could well set a pattern that will revolutionize police procedure throughout the United States.

Except for a few geographical patrol divisions, all the various departments of the municipal police department — formerly scattered among half-a-dozen different buildings often miles apart — have been brought together under a single roof, with the design of the building providing a closer integration between departments than ever before attained.

A combination ground and deck area provides parking facilities for more than 850 police cars. Space is also available for invited public parking.

Underground squad rooms and lockers for the officers of the metropolitan, traffic and central divisions can be easily reached from the lower-level parking area. The basement also contains assembly rooms for the officers.

FIRST FLOOR

On the first floor are the business offices, the information center, communications, traffic division, offices of the Police Commission, a completely equipped auditorium and stage for "show-ups" and a jail for initial booking procedures.

The felon prison and the Record and Identification Bureaus are on the second floor. The third floor is occupied by the detective bureau. The remainder of the building houses various police bureaus and business offices. The eighth floor has an employee cafeteria and lounge.

The 407,826 square feet of the nine levels of the building are distributed as follows: administration 273,148; jail 39,930; parking 95,748.

MATERIALS

Constructed of reinforced concrete, the building also utilized precast concrete partitions in many cases for economy reasons.

Rigid sash windows have been installed throughout the building with ventilation being provided by air conditioning.

To form the multitude of office areas needed, architect Becket's design incorporated movable partitions wherever possible. This type of interior construction permits flexibility and reorganization at minimum expense.

In the jail areas, unbreakable glass partitions were used in many places instead of solid walls or bars. The glass permits more supervision of prisoners with less personnel.

One of the many economy measures designed into the contemporary structure is the piping of steam from the heating plant of the Health Building which is directly across the street from the Police Building.

West entrance foyer showing glazed ceramic tile soffit and column facing with anchor type ceramic veneer wall as background for planting and for bronze sculpture.

CONSTRUCTION DETAIL

Monel metal wire anchors are used to tie building facing to pencil rods which are attached to embedded wire loops.

POURING GROUT

Workman is shown pouring grout to completely fill space between ceramic veneer and concrete wall.

One-Story portion of building in foreground.

Anchor type ceramic veneer facing and glazed ceramic tile medley on spandrel panels.

Architectural observers have noted that this building is of particular interest as one of the finest examples of contemporary design wherein a crisp, clean look is achieved by the use of a complete high-fired ceramic facing. Anchor type ceramic veneer in an off-white with gray-green fleck was used on the first floor portion and on the entire end walls of the building; a happy blending of color and contrast was obtained by the use of a glazed ceramic tile in a blue-gray medley on the spandrel panels and on the entry columns and soffit.

This complete ceramic facing was chosen by the architects because it offers an almost unlimited range of color at a modest cost and provides an impervious surface, unaffected by smog, traffic film, city smoke, etc. An important end result, also, is the extremely low maintenance cost to the tax payers of the City of Los Angeles since it requires a minimum of maintenance and is washed clean mainly by the annual rain fall.

Both the ceramic veneer and the glazed ceramic tile are applied to the building with a solid setting bed which leaves no voids or pockets where moisture might accumulate. The clean, sharp appearance of the large scale ceramic veneer end walls is in pleasing contrast to the vibrant texture of the glazed ceramic tile color motif on the spandrel panels and the result is a colorful, permanent building of outstanding interest.

RECEIVES RECOGNITION

It was recently announced that this building was given an Award of Merit by the American Institute of Architects in their 8th annual competition for outstanding architecture.

In the main lobby, a unique 36-foot long glass mosaic mural by Los Angeles artist Joseph L. Young depicts the growth and development of the city. An architectural work of art, the mural was created with more than 250,000 small pieces of glass in fifty diverse colors.

The monumental mosaic mural, 36 feet long and six feet high, "hangs in space" in the lobby of the building, and is the first major work of this type in the world to depart from conventional installation in the wall or floor. It is comprised of more than a quarter of a million tiny glass stones called "tesserae", each piece set by hand and handcut to the required size of the specific space in the design, were set in place in the artist's studio and mounted on paper. These sections were carefully moved from the studio to the Police building and installed on the cantilevered wall. The special achievement in this work is that the "seams" from one section to another are invisible. The mural is set in a special cement formulated to withstand the particular climatic conditions of Los Angeles and to eliminate any possibility of mosaic pieces falling from the mural because of heat or lack of moisture in the air. More than fifty diverse colors were used by the artist.

The artist has created a design that reveals the history of Los Angeles as seen on a sunny day. Interlocking images that move down the panel show a technique of crisp black outlines superimposed over

TYPICAL INTERIOR VIEW

Showing the use of ivory satin matte tile installed from the floor to ceiling with red quarry tile floor.

POLICE BUILDING . . .

SIDE VIEW of Mural showing detail of cantilever and column which supports the Mural proper. (Left.)

MOSAIC MURAL

Creating the world's largest cantilevered mosaic mural for the Los Angeles Police Facilities building took artist Joseph L. Young nearly two years.

Weighing six tons and appearing to float in air are one-quarter million handcut glass stones depicting the architectural skyline of Los Angeles in panoramic outline. (Below.)

a rhythmic background of abstract shapes.

Among the famous landmarks included in the work are the City Hall, Grauman's Chinese Theatre, oil wells on Baldwin Hills, Los Angeles Harbor and the industrial area. The Growth of Los Angeles is symbolized by the freeway cloverleaf near Civic Center. Old street cars are contrasted with modern trackless trolleys.

Business is spotlighted by Miracle Mile with the Prudential Life Insurance Company building against the skyline. History is reflected in the Alameda Street Mission Church while science is recognized with Griffith Park Observatory. Angel's Flight, UCLA's Royce Hall, both traditional and modern homes, are also part of the mural's story.

Steel, aluminum, copper, concrete and glass are used in this history-making mural, and more than two years were spent in its creation. It weighs six tons. Copper lathing was reinforced with concrete for the basis of the panel structure.

As executed, the mural is cantilevered from two supporting columns in the main lobby of the building. It serves as a divider-partition between the spacious lobby and the public telephone area. The front side of the mural contains the design, a colorful panoramic theme of Los Angeles, dedicated to its phenomenal architectural growth. The back side of the mosaic, which is finished in monotone colors of the hand-set tesserae, serves as a panel to support the public telephones which are actually installed in the cantilevered mural.

Although the mural will last for hundreds of years, no maintenance will ever be required. If cleaning is necessary, a garden hose may be used to wash down any dust accumulation. Brushed aluminum is used for the framing to surround the mural which is about five inches thick. Steel I-beams are used to attach the mural to the structural columns.

The extensive use of interior tile has provided many wall and floor areas with permanent, colorful, practical surfaces that will resist wear, will not require painting and will result in very low maintenance cost.

Such areas include corridor and kitchen walls, tiled to the ceiling with 6"x6" satin ivory hermosa tile and floors of 6"x6" English red quarry tile with acid-proof joints.

Toilet and shower room walls are tiled to the ceiling with 6"x6" oatmeal hermosa tile.

Approximately 100,000 square feet of tile was used on the exterior and interior finish of this building.

INTERIOR

Another feature, designed to speed-up administrative operations, is an extensive pneumatic tube system for sending messages and reports. The sender merely dials the desired destination on an electronic dial and deposits the papers in the tube. Automatic controls route the material to the indicated office outlet.

TYPICAL shower room with walls tiled to ceiling . . . oatmeal tile.

BUILT WITH BOND ISSUE

It was a bond issue, passed by the citizens of Los Angeles in 1947, that made the new building possible.

In 1930, the Police Department moved into "temporary quarters" in the then newly-dedicated City Hall. However, the rapid growth of the city soon made it obvious that the "temporary" quarters would be inadequate.

In May 1949, preliminary plans for a police building were approved but recommended alterations resulted in a delay in construction. During 1950 and 1951, rapidly spiraling building cost and material shortages resulting from the Korean War, forced a re-design of the building to conform to the funds available.

Architect Welton Becket, F.A.I.A., and J. E. Stanton, A.I.A., associated architects, submitted plans that resulted in a low bid of $6,142,548 — more than $2,000,000 under the proposed city budget for the structure. In March, 1952, revised plans were approved.

With appropriate ceremonies, ground was broken for the Police Building on December 31, 1952, and construction started January, 1953.

The Ford J. Twaits Company and the Morrison-Knudsen Company, who jointly entered the low bid, have been in charge of construction.

RESIDENCE of Mr. & Mrs. E. M. Lipetz, Los Angeles

TRANSITION 1935 - 1955

ARCHITECTURAL DESIGN

Work of Architect

RAPHAEL S. SORIANO

A.I.A.

Objectivity must be the attitude of the architect. Without prejudice to any material, the specific material for a job is determined and selected by what it can do in the simplest possible terms and by its cost. Our thinking can change immediately if a better material comes along and can do the work—whether

THE LIPETZ RESIDENCE, built in 1935. Living room's built-in shelves and cabinets serve as seats.

it be steel, concrete, wood, aluminum, plastic or combinations of these or any other new development in our growing technology.

In evaluating different products one must consider their intrinsic qualities to act alone or in concert with other materials for the best possible solution. Sometimes of course, the least costly solutions are not the best solutions. Unfortunately the client who does not say "how much" as his first question is indeed a rarity. So whether one likes it or not the problem of cost enters into the final solution.

Working with different materials in the last two decades we have found that our choice of materials has been in the direction of light strong members with a potential of large clear spans and simple details of integration and quick erection methods.

Simply solved structures must have oneness of concept. The oneness seen in nature. In a tree, for instance, regardless of its type, one finds the branches anchored to the trunk and the leaves, though differing from tree to tree, are in their minute variances still formed on the concept of oneness. Basic structure common to one tree is common to all trees. This quality of oneness in structure is the value for which we should strive in architecture. What we call "beautiful" or "serious architectural accomplishment" must be enveloped in its structural determination and plan by this quality. No matter how complicated the building may be, it is our duty to translate the complexities of its structure with all of its component parts to this concept of oneness.

Unfortunately today there seems to be a tendency to go in the opposite direction. The more complicated, the more curious, multiple mixtures seem to be the reigning fad. This is semblant to an oak tree having its branches covered not only with its own leaves but also those of the fig, the acacia and the split leaf philodendron. "A freak of nature", we would say! But all we have to do is to look around us everywhere at the buildings being put up today to see the same freaks and monsters, looking more like myths than serious architectural concepts.

JEWISH COMMUNITY CHEST CENTER

Los Angeles

Exterior view of side elevation; large, continuous steel windows help to avoid the feeling of enclosure or sense of restriction for children.

(1936)

SORIANO, A.I.A. . . .

For years we have been searching for simplified, economical and flexible systems of structure. First experiments in metallic structures showed some promising economies in cost if a modular system and light steel sections were used. We have used the modular system with wood structures but found it too inflexible and in comparison to steel almost like harking back to the days of the wooden plow. Wood laminations could be used but these are relatively more costly than similarly performing steel members and still depend upon steel connection.

In my first steel house in 1946, or in some of my commercial buildings, the inflexibility of bearing walls was not eliminated. We used expanded steel walls to make the rooms. This posed some rigid problems which were not desirable. The nailing of wood panels in rooms necessitated the introduction of blocks into these steel walls with resulting loss of economy.

In later houses I used a modular H-beam and steel column construction with wood in between the H-beams and wood walls for nailing. This system, though more economical, presented the problem of integrating the slowness of the wooden plow with the efficiency of the modern tractor. This was not yet the complete science of building. These walls were meaningless, expensive toys for the plumber and electrician to butcher up. To eliminate these meaningless walls was the only way to liberation in structure. To make useful walls out of parasitical ones. Then must follow a communion between the structure and these useful walls without burdening them with the weight of the roof.

We are still simplifying our more recent constructions by extending the clear spans. Instead of a 10′ x 20′ module, larger modules and larger spans are used such as, 10′ or 12′ by 20, 30 or 40 foot spans. This is done without adding to the cost of construction and giving still greater flexibility for an infinite variety of floor plans.

Even though steel as we have used it so far has been quite successful for commercial and residential building, the methods for fabrication and erection are still archaic. We fail to exploit steel's maximum work capacity. I hope that the time is not too far away when a more scientific analysis of the material and the concept of integration on this basis will be devised so that we will not have to use the post and beam system or at least this system will be evaluated for maximum performance. We hope too that our new materials, resulting from scientific advancement, will become less prohibitive in cost and more competitive so that the science of building will be able to keep pace with our technological developments.

DESIGNING A TRACT HOME

To design a steel house with maximum efficiency and livability with not more than 1000 sq. ft. of living area, plus a two car garage (not carport). The lot, an average one of approximately 60′ x 100′ in a tract housing development. A house that could be mass produced at comparative price of wood structures. These were the general requirements.

The most disciplined structure and detailing of all its component parts had to be our concept. For here was a challenge to compete cost wise with the already

HALLAWELL SEED COMPANY

San Francisco

Expended Steel joist with wood lath cover.

Plastered walls of expended steel studs and latisteel.

(1940)

STEEL ENTERS FIELD OF RESIDENTIAL CONSTRUCTION

Gato Residence

Van Nuys, California

Here the architect uses steel as the principal framework of this modern home.

Below is shown a portion of the completed living room, looking through spacious glass windows with steel sash, into the adjoining orchard area.

(1946)

EXPERIMENTAL RESIDENCE
Alexandra Curtis
Bel-Air, California

Structural steel of 10' and 20' modules 6wf-3" steel columns and 1½ in. steel decking was used in the construction of this home.

VIEW FROM LIVING-DINING ROOM AREA

Looking toward private gardens, patios and the swimming pool.

Fiberglas enclosures — blue color on carport. The outside walls are of cork.

GENERAL VIEW OF HOME

(1949)

known methods of wood frames. Using steel to frame a house in an already established industry where two by four wood studs is the known language becomes a problem of education. Not because we don't know the language . . . certainly some of the tallest buildings in the world we have built in steel . . . but in the residential field we have been either lax in grasping its potential or simply have had a wood fixation. Perhaps because of scepticism the home builders have not bothered to discover steel's tremendous flexibility and its time saving potential. Here is a medium where the "do it yourself" attitude cannot solve the problem. The builders must have competent professional architectural assistance to produce an article that will benefit the public as well as himself. This seems to me to be one of the reasons why steel has not been given the attention it deserves by the home builders. Here we enter into a new phase of building industry in hous-

STEEL FRAMEWORK RESIDENCE

The architect again uses steel beams and posts in the construction of this Southern California home.

Note how exposed steel columns form frame for fireplace brick.

(1950)

TEN UNIT APARTMENT with a PENTHOUSE

In this modern living structure the architect has again used the steel frame, with 10 ft. by 24 ft. modules.

GARDEN court area on upper floor shows extension of roof beams to form support of outer construction for storm and sun protection.

Below — The completed building as viewed from the street elevation.

(1951)

ing. A phase in which the details must be meticulously planned as the details of a multi-story steel building—requiring not the haphazard concoction of timber and nails but a precise, well detailed structure with an analysis of its component parts. An analysis where the resistance of bolts, base plates, columns, beams and foundation must be analysed in concert to best resist seismic, wind and other stresses, without resorting to the customary diagonal bracing of walls, etc.—as in the case of wood houses. And without resorting to specially made members by selecting from our profusion of steel sections already in existence as stock items.

The few attempts at metal home construction made in the past by certain big corporations were approached from an unscientific, illogical and wasteful point of view. Steel was used as an imitation of wood—using steel joists and studs instead of wood. And because of fear of public reaction, the faces of these

(See page 33)

A STEEL HOUSE FOR MASS PRODUCTION: In this residence, designed for mass production, Architect Soriano has utilized 10 ft. by 26 ft. module steel, plus a 1½ in. steel decking. I-beams extend beyond walls, with steel sash and floor to ceiling windows, to provide roof extension for shade and protection. Interior has exposed steel beams. (1955)

New Administration Building

General Telephone Company

Santa Monica, California

ALBERT C. MARTIN & ASSOCIATES
Architects and Engineers

The new administration building of the General Telephone Company in Santa Monica, illustrates a dynamic combination of contrasting materials. Architectural porcelain enamel attractively blends with stainless steel, concrete, ceramic veneer, and glass to complement its sweeping horizontal and vertical lines.

The exterior portion of the seven story, 113 foot tower, is faced with alternately recessed panels of colorful porcelain enamel and horizontal sills of stainless steel. Below the six story level, this porcelain enameled curtain wall is 24 feet wide, and above that, it spreads to 44 feet in width.

The new building, containing some 200,000 square feet of floor area, provides working quarters for the company's general offices, administrative and engineering personnel. It is part of the company's announced $100,000,000 expansion program for 1955-56.

THE IMPACT OF MODERN FREEWAYS UPON THE COMMUNITY AND INDIVIDUAL

By DEXTER MacBRIDE*

There is many a motorist who travels the Hollywood Freeway, or who swings through the four level structure, who is completely unaware of the social significance of these structures; of the history and development of the great roadways in the communities of the world. He is equally unaware, it is safe to say, as he travels out the San Bernardino or Pasadena Freeways, that these roadways are symbols of philosophical patterns. Further, the motorist might sum up his feelings by saying: "You build roadways that will get me to and from work a little quicker and faster; I don't need to know anything about the history or philosophy of the things."

However, to the professionals who create these freeways, especially members of the Engineering and Right of Way professions . . . a correct understanding of these modern freeways is a key to national progress, community health and personal creativity and satisfaction. For every person in our community is affected by freeway development; you know this when you see the residential tracts springing up along the paths of the freeways in Los Angeles County; when you see industrial concerns arranging their plants adjacent to on- and off-ramps; when you see suburban communities and smaller cities adjusting commercial arteries to coincide with freeway ebb and flow. It doesn't take a perceptive eye to see the commuters coming into the heart of the city, wave upon wave, at 7, 8 and 9 on Monday mornings; to visualize our citizens leaving at 4, 5, and 6 that evening, returning to what is now technically called "bedroom communities." These morning and evening tides: the weekend exodus and return: We are all part of this scene, and all are affected by it. And, to some extent, this is the picture all over America. The internal combustion engine, gasoline, oil, rubber, steel, glass, concrete: these dominate our lives and create our patterns. And perhaps the most modern, the most symbolic, of all the patterns is The Freeway.

Some of the lay reaction to our freeways is quite interesting. The size of the project, the vastness of the construction effort, is often emphasized; newspapers often editorialize upon the Bigness, Expensiveness. Some comment upon Newness of the Freeway concept. Others emphasize the scope of the Freeway plans, linking together as they do entire communities, cities, even states. Implicit in these comments is the idea that, in man's story of Transportation and Community planning, we have written a completely new chapter.

NOTE: Dexter MacBride is Senior Right of Way Agent for the California Division of Highways, and presented a paper on the historical perspective, philosophy, and legal concepts of freeways before members of the American Society of Civil Engineers, Los Angeles Section, at a recent meeting. Because of the tremendous interest in the subject of highways, this summary of MacBride's comments is being reproduced.

Modern Freeway Cross-Section

In contrasting the modern freeway cross-section and its method of construction with the historical concept of the road builders of ancient Rome, the speaker declared the most famous roadway of all times was the Via Appia, the Roman answer to the freeway problem. The cross-section detail and construction conception of this road dominated the Western world until the 18th Century.

The width of the right of way was 35 feet, vested under the Roman Standard SPQR, the Senate and the Roman people. They excavated a trench the width of the right of way; the trench went down some 3 to 5 feet. It was tamped; sand or mortar was laid. Then came four courses: The Statumen, large flat stones 1 to 2 feet in thickness; the radus, about 9 inches of smaller stones and lime; the nucleus, 1 foot of small gravel mixed with sand and hot lime; then the wearing surface, the summa crusta, was placed, some 6 inches thick, composed of lava rock. Remember that the total width of right of way was 35 feet. The two central lanes were a total width of 15½ feet; paralleling these on either side were curbs, 2 feet wide and 18 inches high. Then, beyond the curbs were one-way roads, called margines, each 7¾ feet in width. With this pattern, so like our freeway concept in traffic separation, the Romans set a cross-section which was undisputed until the 1700's. A one mile section of the Via Appia, it is estimated, cost about $750,000 in 1955 American dollars. ($300,000 in 1926 American money.)

Road Building Revolution

Emphasizing that a good revolution in road building took place in the late 1700's, the speaker said the following concept emerged:

1. The subsoil must support the load; this material must be drained and compacted;
2. A thin, light skin for surface wearing and watershed;
3. Compaction, under traffic, possible;

4. Drainage must be provided;
5. Maintenance imperative.

The four men who taught these new concepts were the giants of their day. Of McAdam . . . whose name is now perpetuated in the term macadamizing . . . it was said: "He is the greatest contributor to the welfare of mankind that England has ever produced." Those of you interested in biographic matters should get acquainted with John Metcalf. He was known as "Blind Jack"; without sight, he ran his own centerline grades; establishing drainage contours. His is a fabulous story.

Economic and Human Reactions

The economic and human reactions to the freeway problem may be summarized in five major categories: 1) Financial, 2) Community Planning, 3) Real Estate Valuation, 4) Personal, and 5) Legal.

In analyzing aspects of community planning the speaker made the following observations:

Another facet of the Modern Freeway Concept which is pertinent to our discussion is that of Community Planning. Here we find such terms as the "By Pass"; "Frontage Roads", "Cul de sac", "downtown" or "central business district", "decentralization". Also, it is in community planning that we must define some of the roadway terms most frequently used today: Conventional highways, expressways, turnpikes, throughways, and freeways. Basic to the planner is the fact that the community must permit adequate movement of goods, ideas and people. Roads are an integral element in community life. The conventional road is constructed for the dual purpose of handling traffic and supplying access to the abutting property owner. The expressway, usually constructed in rural areas, is a 4 to 6 lane divided highway on which intersecting roads cross the expressway at grade; access to abutting property from the through lanes of traffic is tightly restricted through a series of parallel-frontage roads. Freeways are divided highways, 2 or 3 lanes in each direction; intersecting streets cross on grade separation structures; access from the local street system is permitted only at points designated by public authority; access from abutting property to major through lanes of traffic is permitted only where public authority permits connection with public street systems. The turnpike and thruway are the same facility as the freeway, except that they are toll facilities, with less frequent intervals of access from the local street systems.

It is obvious to planners and developers that an adequate system of highways is imperative in the development of agricultural, residential, commercial and industrial properties. It is also obvious that the expressway, the throughway, turnpike and freeway have been conceived with the major thought of moving the greatest volume of traffic with maximum safety and efficiency.

Conventional Highways

In stressing the differences between conventional highways and freeways, one might illustrate with the so-called "shoestring" and "ribbon" problem so acute throughout the country. One of the most striking examples of Ribbon development in the United States has been California Legislative Route 26, so called Garvey-Ramona Avenue. Within 4 years after the construction of this fine, four-lane highway between Los Angeles and Pomona, traffic congestion and related problems were so acute that a 25 mile per hour limit was imposed on much of its 30 mile length. This was because the route, a conventional road, became clogged with the signs, driveways, poles, walkways, parking areas, intersections and other evidences of the typical unrestricted access and uncontrolled roadway facility. Another much-cited example is the boulevard between the cities of Washington, D. C. and Baltimore . . . a 30 mile section of U. S. Route #1. Writing in 1943, one engineer stated ". . . on this section there are 618 commercial establishments, 665 residences, or one every 125 feet on the average, each with its own entrances and exits multiplying the traffic hazards, reducing highway capacity, and precipitating congestion; it is one of the most dangerous sections of road in the country."

"By-Pass" Freeways

In the same light, a great deal of revealing information has come to light on the so-called "By Pass" freeway design . . . a kind of belt highway which carries traffic around an urban area, and connected to the by-passed community at a few certain major intersections. Community after community in this state has raised the question "What will happen to our business and residential value patterns after the freeway by-passes our town?" For example, the people of Templeton, a small community between Atascadero and Paso Robles, located on U. S. 101, raised this question in 1953, when the Division of Highways completed an expressway by-pass of their farm community. The Division (as in every instance where a community is affected by our new construction) conducted an exhaustive study of this community, before and after the by-pass. The results of the Templeton By-pass upon their economy is contained in a report which appeared in the July-August 1955 issue of the California Highways and Public Works magazine. The results of this study and studies conducted in North Sacramento, Anderson, Auburn, Escondido, Fairfield, Temecula and similar communities, reveal the same basic data. All of the studies may be read in the Public Works magazine; perhaps I may summarize them in this fashion, as outlined by the Transportation and Communication Department of the U. S. Chamber of Commerce:

Business activity generally increased

Property values may be "upped"
Parking made more convenient
Pedestrian safety and convenience increased
Fewer traffic accidents and delays
Less wear and tear on city streets
Reduced noise, fumes, etc.
Through-traffic expedited
Local traffic control simplified.

Frontage Roads

In similar fashion, the community planner knows that the frontage road, which is an inseparable concomitant of the modern Freeway system, is productive of beneficial results to the community. This is especially true of commercial and industrial development. These roads, called frontage roads, service roads or outer highways, are a key to modern business development. For example: The 30:5 acre site adjacent to the Santa Ana Freeway now occupied by the 15 million dollar West Coast Branch of Lever Brothers Manufacturing Company. The land was acquired in 1949 at a price of $9,000.00 per acre; design plans of the Freeway were known to the purchasers. Today, current sales indicate a value in excess of $25,000.00 per acre. When a 15 million dollar investment for an industrial site is located on a service street adjacent to a freeway . . . and a street that is cul-de-saced . . . 2,000 freet from the nearest insecting street: Here is eloquent testimony of the new concept in planning and the terrific impact of freeway construction on community economy. For those of you interested in Outer Highway development and its relationship to commercial establishment, may I urge you to study the May-June 1948 issue of the California Highways and Public Works magazine, which contains an excellent article entitled "Outer Highways — A Study in Successful Planning for Major Retail Business Development." The study deals with the Crenshaw Shopping Center development, and the planning which was predicated upon the use of Outer Highways.

Community Growth

It is scarcely necessary for me to round out this commentary on the various aspects of Community Planning . . . which actually is so interwoven with the concept of property values that we have been talking about Real Estate Valuation coincidentally . . . it is scarcely necessary to point out the remarkable transition of agricultural lands into residential properties, and residential properties into commercial sites, which characterizes land development along California's many freeways. Citrus groves, walnut orchards and beanfields, because of the imminence of freeway construction, are transformed into vast residential suburbs. A drive out the Santa Ana and San Bernardino Freeways will convince you of this. And the homes in the tracts, built adjacent to the freeway right of way line, bring equal prices with those farther removed, in the heart of the tract. As a matter of fact, because of cul-de-sac planning and availability to the freeway, properties contiguous to the right of way line often sell for higher prices.

In the increase of property values, the Freeways play no favorites. An interesting example is located at the west end of the City of Pomona, between Holt and Bellevue Avenues, on Arroyo Avenue (sometimes called Garvey extended). Arroyo is, in reality, a part of the planned Temescal Freeway. On the North side, a large residential subdivision has just been completed, immediately adjacent to the Freeway right of way and, in anticipation of full development of the Temescal Freeway facility. On the south side, immediately contiguous to the freeway right of way line, a large commercial shopping center has been planned, featuring national-name chain stores.

An outstanding example of ultra modern residential-apartment construction, immediately adjacent to the freeway right of way line, may be found on the northeast quadrant of the Santa Ana Freeway and Lakewood Boulevard. As a matter of fact, the apartments lie adjacent to the on and off ramp facilities. This is the premium subdividers place upon convenience and access to freeway facilities.

Highway Controls

The speaker discussed various methods whereby governmetal bodies have controlled highway facilities; and stated the methods included:

1. Controlled access highways
2. Marginal land acquisition
3. Land-use controls
4. Acquisition of highway development rights.
5. Restriction of ribbon development
6. Adoption of liberal right of way policies.

In California, we have emphasized the controlled access highway facility, as our answer to traffic congestion. Speaking in non-legal terms, a controlled-access facility is a freeway or parkway especially designed for through traffic, to which motorists and abutting property owners have only a restricted right of access, light, air and view. Freeways are open to all customary forms of motor traffic.

Construction of freeways in this state must be accompilshed, insofar as the acquisition of property rights is concerned, in conformance with Article 1, Section 14 of the Constitution, which provides that "Private property shall not be taken or damaged for public use without just compensation having first been made to, or paid into court for, the owner".

Thousands upon thousands of parcels have been acquired, by Division of Highways Appraisal and Negotiation procedures, for freeway projects. Approximately 98% of all lands required for these projects are settled in a manner satisfactory to the property owner, without recourse to condemnation proceedings. Among the approximate 2% which must be processed to court trial, many are by stipulated judgment or "friendly suit," to clear up such matters

(See page 34)

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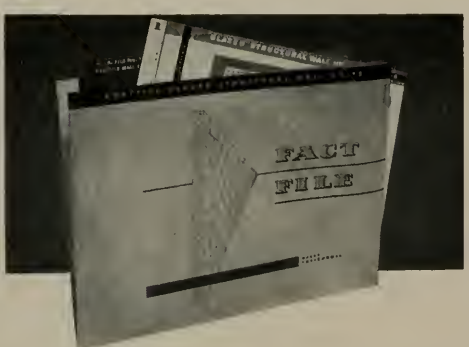

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WASHINGTON STATE CHAPTER

The May meeting, held at the Seattle Yacht Club, was a joint AIA-Alumni-Student meeting with Angelo Pellegrini, author and professor of English of the University of Washington speaking on the subject, "Behind the Awards, There is a People and a Way of Life." Prior to the meeting an open-house was observed at the School of Architecture.

New members: George Bolotin, T. Gregory Saito and W. Don Smith, Corporate. Lucian Cassetta and Frederick P. Farmer, Associates. Walter M. Hollerbach, Howard N. Maher, David E. McDonald, and Joyce S. Stevens, Junior Associates.

NORTHERN CALIFORNIA CHAPTER

The annual meeting of the Chapter will be held on May 29th, with election of officers, and a contest for the best 5-minute slide presentation.

To commemorate the 75th Anniversary of the Northern California Chapter, AIA, the Women's Architectural League presented an outstanding House Tour and Panel Discussion the latter part of this month. The theme and title of the program was "Contemporary: 1881-1956", and covered early San Francisco residences to the present time.

PASADENA CHAPTER

Brick Masonry and Concrete was the theme of the May meeting held at Eaton's Santa Anita, with Norman Kelch, Architect, speaking on the subject "Brick Masonry and Grout Joints". Robert Boner, repre-

Northern California Chapter:
Wayne Hertzka, President; Wm. Stephen Allen, Vice-President; Rex Whitaker Allen, Secretary; C. Morrison Stephens, Treasurer; and Directors: Wm. Corlett, Robert Kitchen and Bernard Sabaroff. Executive Secy., May B. Hipshman. Chapter Offices, 26 O'Farrell St., San Francisco.

Orange County Chapter:
Gates W. Burrows, President; George J. Lind, Vice President; John A. Nordbak, Secretary; Aubrey F. St. Clair, Treasurer. Directors: Wm. E. Blurock, Everett E. Parks, E. Lynn Child. Office of Secy., 1606 Bush St., Santa Ana, California.

Oregon Chapter:
Donald W. Edmundson, President; Walter L. Gordon, Vice-President; Earl P. Newberry, Secretary; Charles Gilman Davis, Treasurer. Directors: Donald J. Stewart. Office of Secy., 619 Builders Exchange Bldg., Portland.

Pasadena Chapter:
William H. Taylor, President; Lee B. Kline, Vice-President; H. Douglas Byles, Secretary; Lyman F. Ennis, Treasurer. Directors: Henry C. Burge, Keith P. Marston, Ernest C. Wilson and Harold B. Zook. Office of Secty., 622 S. Lake Ave., Pasadena.

San Diego Chapter:
George J. Lind, President; John A. Nordbak, Vice-President; Willard T. Jordan, Sec.; Marvin W. Renfro, Treas. Office of Secretary, 1293 Harbor Blvd., Costa Mesa.

San Joaquin Chapter:
Philip S. Buckingham (Fresno), President; Allen Y. Lew (Fresno), Vice-President; James J. Nargis (Fresno), Secretary); Paul C. Shattuck (Merced), Treasurer. Directors: William C. Hyberg, David H. Horn, Alastair Simpson. Office of Secty., 627 Rowell Bldg., Fresno 21.

Santa Barbara Chapter:
Glen C. Mosher, President; Lewis Storrs, Vice-President; Darwin Ed. Fisher, Secretary; Wallace W. Arendt, Treasurer. Directors: Robert I. Hoyt and Roy Wilson. Office of Secty., 20 S. Ash St., Ventura.

Southern California Chapter:
Paul Robinson Hunter, President; Stanley R. Gould, Vice-President; Aleck Murrey, Sec.; Graham Latta, Treas.; Directors, Stewart S. Granger, George Vernon Russell, Cornelius M. Deasy, William Glenn Balch. Exec.-Secy., Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter:
Nelson J. Morrison, President; Gilbert M. Wojahn, 1st Vice-President; Stacey G. Bennett, 2nd Vice-President; Robert M. Jones, Secretary; Robert A. Parker, Treasurer. TRUSTEES—Lyle N. Swedberg and Robert B. Price. Office of Secy., 2907 A Street, Tacoma 2, Wash.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Lloyd J. Lovegren, President; James J. Chiarelli, 1st Vice-President; Harold W. Hall, 2nd Vice-President; John L. Rogers, Secretary Albert Bumgardner, Treasurer. J. Emil Anderson, Robert H. Dietz, Robert L. Durham, and Carl F. Gould Directors. Miss Dayis Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter.
Carroll Martell, President; Carl H. Johnson, Vice-President; Ralph J. Bishop, 2nd Vice-President; William C. James, Secretary; Lawrence Evanoff, Treasurer. Directors: Kenneth Storment, Victor L. Wulff. Office of Secy., 524 W. 4th Ave., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President; Harry W. Seckel, Vice-President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P.O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS:
John Lyon Reid, President (San Francisco); William G. Balch, Vice-President (Los Angeles); Lee B. Kline, Secretary (Pasadena); Albert B. Thomas, Treasurer (Sacramento); Miss Rhoda Monks, Office Secretary. Office of Secty., 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BD. ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles), Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Angeles; San Francisco Office, Room 300, 507 Polk St.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Albert Beber-Vanzo, Secty; Stanley Howatt, Treasurer. Club offices 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
J. Morris Hales, Ceco Steel Products Corpn, President; H. C. Galitz, Westinghouse Electric Corpn, Elevator Division, Vice-President; Owen L. McComas, Arcadia Metal Products, Secretary; LeRoy Frandsen, Detroit Steel Products, Fenestra Building Panel Division, Treasurer.

Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institute—Los Angeles:
D. Stewart Kerr, AIA, President; R. R. Coghlan, Jr., Vice-President; W. F. Norton, Secretary; Malcolm Lowe, Treasurer. E. Phil Filsinger, Liaison Officer, Producers' Council, Gladding, McBean & Company.

sentative of Portland Cement, also spoke on "Architectural Cement," and John K. Minashian, Structural Engineer, presented a slide program pertaining to pre-stressed concrete, tilt-up, lift-slabs and thin-shell concrete.

The Chapter has joined with the Southern California Construction Specifications Institute and Producers' Council in sponsoring a Specifications Course to be given at the Pasadena City College. The two full year course will offer a degree in Associate in Arts.

New members: Vincenti C. Ponce and John R. Duda, Associates.

OREGON CHAPTER

William Stanley Parker was the principal speaker at the May meeting, taking as his subject "Architect-Owner Contracts," and discussing in detail the A.I.A. Contract Documents.

Glenn Stanton has accepted an invitation from the Minister of Public Works of Turkey to serve on an architectural jury in Ankara, October 1-15. The jury will consist of three Americans and will judge a competition for the selection of an architect for a new "Landgrant" type of University for eastern Turkey at Erzurum.

SAN DIEGO CHAPTER

Calvin Straub of the School of Architecture, University of Southern California, spoke on the subject "modern Architecture in Mexico" at the May meeting held at the San Diego Yacht Club.

President Frank L. Hope discussed Senate Constitutional Amendment No. 6 which will appear on the November ballot.

New Member: Robert E. Des Lauriers, Corporate Member.

SOUTHERN CALIFORNIA CHAPTER

May activities consisted principally of hosting the Annual Meeting of the American Institute of Architects which brought into Southern California leading architects from all parts of the world.

Early reports indicate the convention was one of the best attended and programmed in the long history of the organization.

CALIFORNIA COUNCIL OF ARCHITECTS

A four day professional program for the annual convention, October 10-14 in Yosemite, is being scheduled according to a report of William Corlett, Chairman of the Convention Advisory Committee. The program will include Registration and pre-convention meeting of the council on October 10, two open committee seminars, a keynote address, a major panel discussion, and the annual California-Nevada-Hawaii Regional Conference board meeting.

Corlett also announced that for the first time there would be an Architectural Exhibit at the convention in which AIA members throughout the state will participate.

WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

Structural Engineers Association of Northern California

Howard A. Schirmer, President; Walter L. Dickey, Vice-President; Harry B. Corlett, Secretary; Cecil H. Wells, Jr., Asst Secy.; William K. Cloud, Treasurer. Directors, William W. Brewer, Walter B. Dickey, Wesley T. Hayes, Jack Y. Long, Michael V. Pregnoff, Clarence E. Rinne, Howard A. Schirmer. Office of Secy., 411 Market St., San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

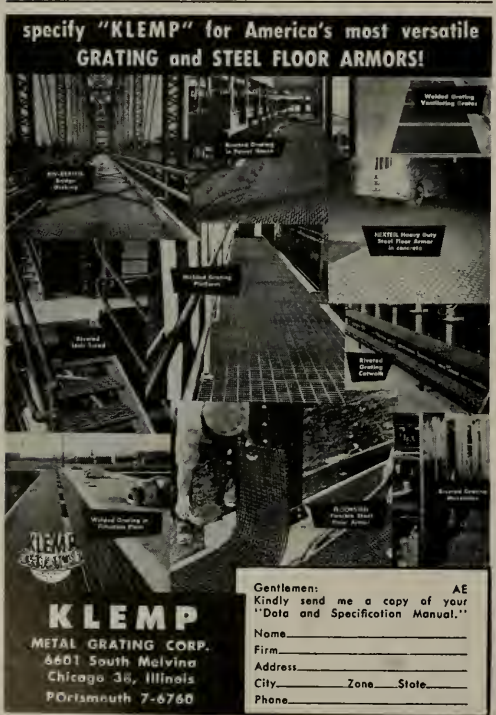
George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

A tour of facilities at the US Naval Ordnance Test Station at China Lake, constituted the May meeting. Included was a visit to the Michelson Laboratory and Ordnance Display, and an inspection of the facilities at Randsburg Wash Projectile Range.

New members: Leon Borjas, Allied Member; Charles R. Magadini and Hobart John Robertson, Associate Members; and Walter Arnold Brugger, Vincent R. Bush, Richard W. Campbell, Ralph Joseph D'Agostino, Harold L. Epstein, Noel K. Finley, Ben Gordon, Horace M. Hansen, Ben R. Hopkins, C. Franklin Knowlton, Jr., John Loevenguth, C. Keith Mason, David L. Messinger, Robert E. Parker, Harry G. Petrey, Zorah E. Sheffner, Charles Allan Spencer, Leonard Standers and Richard J. Tranbarger.



AMERICAN SOCIETY OF CIVIL ENGINEERS—Los Angeles Section

The annual ASCE Field Day will be observed June 8th at the Oakmont Country Club, Glendale, with activities including handicap golf tournament, refreshments, Junior vs Senior ball game, dinner and entertainment.

CALIFORNIA SOCIETY OF PROFESSIONAL ENGINEERS

The 8th Annual meeting and convention of the California Society of Professional Engineers in Modesto, May 31-June 2, will hear Robert J. Rhinehart of Pine Bluff, Arkansas, deliver the key address at the annual banquet on the evening of June 1 on the subject "Today's Professional Engineer." Rhinehart is president-elect of the National Society of Professional Engineers, which includes the California group and 40 other State Societies with a total membership of over 36,000 professional engineers.

Convention program details include a workshop for Chapter secretaries and treasurers, meeting of the board of directors, and general membership conferences. Tours to food processing plants, sightseeing trips, golf and other entertainment round out the program.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"Prestressed Concrete Symposium" was the subject of the May meeting held in the Engineers' Club, San Francisco. Speakers on the program included Robert J. Cole, manager Pacific Coast Construction District, Construction Materials Division of John A. Roebling's Sons Corp.; Harold Price, general manager, Structural Concrete Products Division of the Basalt Rock Com-

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

CDR. Paul E. Seufer, President; J. G. Wright, 1st Vice-President; COL. Wm. F. Cassidy, 2nd Vice-President; H. T. Anderson, Secretary; Thomas Hurley, Treasurer. Directors: COL. L. R. Ingram, LTCOL. C. S. Lindsey, E. H. Thouren, CDR. W. J. Valentine, P. Wm. Kohlhaas, BGEN. D. F. Johns, RADM. C. A. Trexel, COL. Paul D. Berrigan, and Larry L. Wise.

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pany, and T. Y. Lin, Associate Professor of Civil Engineering, University of California, Berkeley.

The three speakers discussed the subject from each of three points of view: 1) Professor Lin as a designer, 2) Price as a contractor-fabricator, and 3) Cole a a material supplier. Following the presentations the meeting was opened for a general discussion.

Announcement was made that the 1956 Convention Committees have been selected and are already working on a strong program for the meetings which are scheduled to be held in Reno, Nevada.

Don Hicks, chairman, announced the Annual Picnic will be held June 30 at the Turtle Rock Ranch on the north slope of Mt. Diablo, with golf being played at the Castlewood Country Club.

AMERICAN SOCIETY OF CIVIL ENGINEERS SAN FRANCISCO SECTION

Air pollution in the Bay Area will be the subject of the regular June Section meeting and will feature Weldon L. Richards, Berkeley councilman and member of the board of the newly formed Bay Area Pollution Control District, and William H. Claussen of the California Research Corporation as principal speakers

FEMINEERS

The Femineers observed their annual Scholarship Benefit Fashion Show at the California Golf Club in May, with Barbara Whitmore of San Francisco speaking at the luncheon on the subject "Special Preview of Fall."

The annual Scholarship Luncheon and Fashion Show is for the purpose of raising funds for an engineering scholarship to a deserving student, who without scholarship assistance could not continue his engineering education

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

The Association is conducting a strenuous educational campaign to acquaint the public with provisions of Senate Constitutional Amendment No. 6, which will be voted upon by the public at the November general election.

Provisions of the proposed legislation would permit governmental authorities to employ private architects and engineers on a contract basis when the staff of any state agency is unable to perform the work within a desirable time.

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COLLEGE COURSE IN ARCHITECTURAL SPECIFICATIONS WRITING ANNOUNCED

Coincident with completion of the seventh "house that students built," authorities at the Pasadena City College announced the addition of a course in Architectural Specifications Writing to its curriculum.

The new course, which begins this Fall, is a two-year course at the freshman and sophomore level and offers a degree in Associate of Arts.

Eight areas are studied: Drafting Techniques and Methods, Component Division of Construction, Legal Regulations Governing Building Construction, Construction Sequence, Test Data on Construction Materials, and Manufacturers' Products and Specifications. Cooperation between architects, manufacturers and builders was of primary importance in the establishment of the program, according to Robert G. Moses, chairman, department of engineering and technology.

NORTHERN CALIF. CHAPTER AIA MOVES INTO NEW OFFICES

The Northern California Chapter of the American Institute of Architects has moved into new and larger offices, according to an announcement by Wayne Hertzka, president.

The new offices are located at 47 Kearny Street, San Francisco.

ARCHITECTURAL PARTNERSHIP FORMED IN FRESNO

Walter Wagner, architect and engineer, recently announced formation of a partnership with six key men who have been associated with him for the past ten years.

The new firm will be known as Walter Wagner & Partners, Architects and Engineers, and in addition to Wagner the partnership includes Paul Harris, architect; James A. Blayney, mechanical and electrical engineer; Henry DuPertuis, architect and manager of the firm's Merced office for the past eight years; Paul Schoenwald, architect; Will Thomas, architect; and Harry Bode.

The firm, with a staff of thirty-four, including six at its Merced office, is one of the largest architectural and engineering firms in the San Joaquin Valley, specializing in school projects including elementary, high, and college. The firm also engages in commercial work, and jobs include churches, medical buildings, hospitals, and public buildings.

CHARLES D. CUMMINS DISTRICT MANAGER

Charles D. Cummins has been appointed district manager of Worthington Corporation's Seattle office, according to an announcement by William A. Meiter, general sales manager. He succeeds E. D. Schively, who has accepted a special assignment in the company's Canadian operations.

Cummins joined Worthington in 1925 as a general line salesman following graduation from Oregon State University in 1924 with a Mechanical Engineering degree. He was appointed Assistant District Manager of the Seattle office in 1949.

The firm maintains branch offices in Portland, Oregon, under direction of Norman E. Wolfe, and a sales operation in Spokane under Harley M. Yake.

NEW TERMINAL BUILDING

The City of Reno, Nevada, has commissioned the architectural firm of Vhay & Grow of Reno, to draw plans and specifications for the construction of a new Terminal building at the Municipal Airport at Reno.

Considerably increased air traffic in and out of Reno, together with the need for expanded facilities in the foreseeable future, caused city officials to make funds available for the new building.

RICHARD D. McNISH H.B.I. DIRECTOR P.R.

Richard D. McNish has been appointed director of public relations by the Home Builders Institute of Los Angeles, according to an announcement by R. Reese Myers, president of the organization.

McNish, who previously served as a field representative, will work closely with William H. Hannon, public relations committee chairman, in developing a speakers bureau, the preparation of literature for home buyers, and in the development of a public relations manual for Southern California home builders.

COURTHOUSE ANNEX PLANNED

Architects Schubart & Friedman of San Francisco are working on plans for the construction of a $300,000 annex to the Marin County Court House in San Rafael.

The new building, which will be three stories in height and will also contain a large basement of 24,000 sq. ft. of floor area, will be of Type 1, reinforced concrete construction, and will provide facilities for new Courtrooms, Judges offices, and Jury rooms.

AUTOMOBILE SALES AND SERVICE

Architect Pierre Woodman of Ontario is completing plans and specifications for the construction of a 2-story concrete block automobile sales and service building in Chino for the M. K. Smith Company.

The new facilities will contain 7,000 sq. ft. of floor area, and construction will include a composition roof, security sash, extensive plate glass and plate glass sliding doors, and heating and air conditioning.

ANNUAL ACHIEVEMENT HONORS ANNOUNCED

The annual achievement honors for California State Polytechnic College architectural majors were divided by nine students, ranging from freshmen to seniors.

The William P. Holdredge award for the best freshman working drawings went to Peter K. Phillips of Fresno. Robert Bacon, Los Angeles, and James Ward, Redlands, shared honors in competition for the William L. Pereira Award. Ron Folsom, Berkeley, and Ray Takata of Sacramento won the John Lindsay Award. The Scarab Competition Award, for design of an urban branch library, went to Takata, first; Stewart Woodward, La Jolla, second; and Richard MacRae, La Canada, third; and the achievement award from the Student Chapter, A.I.A., went to William Roth, Bellingham, Washington, and Donald Bensen of Arcadia.

William Wurster, Dean of the University of California's School of Architecture, was the principal speaker at the awards dinner, discussing "Education."

L.A. ARCHITECT DESIGNS SAN SALVADOR BUILDING

After a nationwide survey, two Los Angeles men, Raymond R. Shaw, Architect, and William D. Coffey, Structural Engineer, have been selected by the Banco Hipotecario de El Salvador to design and supervise the construction of their new two million dollar head office building.

The new building will occupy a piece of property approximately 161 x 195 ft., and will contain 95,000 sq. ft. of floor space. Building will comprise a basement and three or more floors above. Basement will be used for storage and a parking garage, and the ground floor will be divided into mercantile shops and a spacious entrance to banking room.

Banking facilities will occupy the entire second floor and all floors above.

Access to the Banking Room from the street level will be provided by two-way escalators, stairs and an elevator. The building will be a Class "A," fireproof construction, steel frame, and reinforced concrete floor slabs. It will be the first multi-storied steel frame building to be erected in San Salvador.

CALIFORNIA RESTORES BENICIA MONUMENT

California State Architect Anson Boyd recently announced the Division of Architecture has started work on restoration and improvement of the Benecia State Capitol Historical Monument at the northwest corner of First and G streets in Benicia.

The State Legislature allocated $230,000 of State Park funds for the project last year.

The building was constructed as a city hall by the City of Benicia in the winter of 1852 and completed in January 1853, at a cost of $24,800.

Alfred Eichler, AIA, Sacramento, is supervising architect on the project and Ralph E. Wastell will act as coordinating architect.

THIRTEEN STORY OFFICE BUILDING

Architect Victor Gruen of Beverly Hills is completing plans and specifications for construction of a 13-story, reinforced concrete office building at 3540 Wilshire Blvd. in Los Angeles for the 3540 Wilshire Corp.

The new building will contain 200,000 sq. ft. of floor space, and will be a steel frame, air conditioned building with all modern facilities.

RICHARD A. VAILL APPOINTED WESTERN REGIONAL MANAGER

Richard A. Vaill, formerly district manager at San Francisco, has been appointed western regional manager for the Edwards Company, Inc., according to a recent announcement by Robert L. Kempton, assistant general sales manager.

The western region was formed with general offices in Los Angeles, to better serve the ten western states and Hawaii.

HOSPITAL BUILDING

Architect Albert W. Kahl of San Mateo is working on drawings for construction of a 25-bed hospital in Escalon for the Pioneer Memorial Hospital District.

The new hospital building will be one story in height, frame and stucco construction, aluminum sash, concrete and vinyl tile floors and will provide facilities for complete operation of a modern hospital plant.

ARCHITECT SELECTED

The architectural firm of Walter Wagner & Partners, Fresno, has been commissioned by the Fresno Builders Exchange to draw plans and specifications for construction of a new Builders Exchange Building to be built in Fresno.

HARRAH'S CLUB WILL REMODEL

Architect Russell Mills of Reno, Nevada, is preparing drawings for remodeling of Harrah's Club in Reno. The 2-story building will be completely remodeled, interior and exterior, and a plate glass front will be installed to the second floor.

Estimated cost of the work is $500,000.

CARRIER CORP. TO BUILD AT PUENTE

Construction by Carrier Corporation of a 6-million dollar west coast plant for the production of air conditioning equipment, furnaces and water heaters at Puente, California, has been announced by Lyle C. Harvey, senior vice president of the firm.

The new manufacturing plant will have in excess of 500,000 sq. ft. of manufacturing, engineering and office facilities and will be located on a 68-acre plot 18 miles east of Los Angeles.

William J. Bailey, Carrier vice president and general manager of the division at Monrovia, will be in overall charge of the new plant.

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PRODUCER'S COUNCIL PAGE

The National Organization of Manufacturers of Quality Building Materials and Equipment (Northern California Chapter) affiliated with THE AMERICAN INSTITUTE OF ARCHITECTS

President, John C. Cowley, **The Brookman Co., Inc.**, 2833 Third Street
Vice-President, Philip F. Brown, Jr., **Otis Elevator Company**, No. 1 Beach Street
Secretary, Stanley L. Basterash, **Western Asbestos Company**, 675 Townsend Street
Treasurer, John J. O'Connor, **H. H. Robertson Company**, 55 New Montgomery Street

Edited by Robert W. Harrington, **Clay Brick and Tile Association**, 55 New Montgomery Street

COLOR STYLIST on MODEL HOME PANEL PROGRAM

Helen Trends and Bob Touros discuss modern color tile.

Helen Trends, color stylist for Pomona Tile Company, described "How to Plan a Color Scheme" during a panel discussion on "The Model Home" at the Western Home Builders Forum recently held in conjunction with the California International Home & Garden Show at the Oakland Exposition in Oakland.

Prior to the Oakland Forum discussion, she, together with Bab Touros, Pomona Tile representative in San Francisco, addressed the San Francisco Chapter meeting of the Producers' Council, describing in interesting detail the many uses and development of color tile.

PRESENTED PAST PRESIDENT'S CERTIFICATE

Mr. Clorke E. Wayland was presented the Past President's Certificate at the meeting by Philip F. Brown, Vice-President of Producers' Council. Wayland was one of the original founders of Producers' Council in San Francisco, as well as being a charter member.

CLARKE E. WAYLAND

USE QUALITY PRODUCTS — THE PRODUCERS' COUNCIL, NATIONAL ASSOCIATION OF MANUFACTURERS OF QUALITY BUILDING PRODUCTS — CONSULT AN ARCHITECT

SORIANO, A.I.A.

(From page 21)

houses wore the old familiar mask of Cape Cod. Having preconceived ideas of what the public will or will not "accept" and using this false reasoning as a barometer of progress seems to me to be thoroughly lacking in understanding public reaction. The public's reaction as I have experienced it has been favorable to the concept of better living. It doesn't matter in what media one achieves this concept. The public is interested in a livable house for a reasonable price. Certainly those people who create and produce should set the standards rather than leaving it to the public who actually know no more about it than they do about the design of the cars they drive or the myriad gadgets they buy in the five and ten or the hardware stores.

The American market for mass produced houses as it stands today consists, for the most part, of three bed rooms with two full baths—comprising approximately 1150 sq. feet. Here again was another challenge—to reduce the square footage by approximately 150 sq. feet and still keep the three bedrooms, two baths, living dining area and kitchen. Solving this made me more aware of my previous beliefs that to plan well and economically one must leave all personal tricks and whims aside, evaluating objectively for cost and performance—for ease of integration and simplification of component parts. Large preassembled parts seemed to be the answer. Mass fabrication by efficient machinery, welding of columns and beams electrically, storage walls made and preassembled in the cabinet shop, glass sliding doors bolted to their precise place, solid panels and exterior non transparent walls keyed into their steel angles which have been preassembled with the frame; frame consisting of steel H beams and columns fabricated as one unit on a precise modular system; steel decking spanning between beams to make the roof as well as the finished ceiling.

In comparing the conventional type of wood structure with our concept it will be found that every room in the wood structure is surrounded by parasitical walls. For example a 10′ x 20′ room will be deliniated by 6 inch walls. This means a loss of 11 lineal feet of 2 foot deep space. The roof also is supported by some of these walls thus preventing the maximum utilization of the floor area. Also to achieve a long clear span with timbers they must be at least twice as thick as steel beams and spaced at more frequent intervals. As an example, this house of 1000 sq. feet was achieved with seven beams and fourteen columns where it would be necessary to use fifteen to twenty-four beams in the wood structure. After wooden beams are up the problem of finishing the shrunken and cracked beams becomes a costly one. With the steel beams the problems of refinishing and readjustment are non-existent. Not counting the fact that the steel frame is erected square and plumb within a matter of three or four hours—less time than it would take the carpenters to readjust the wood frame. With steel a precise modular structural system remains—depending on no bearing walls—only on perimeter columns. The wasted 2 foot depth of wall space in the wood structure is used now for wardrobes or cabinets of other types. Where given the same same restrictions, the tendency of the conventional wood house would be toward dark, gloomy and smaller appearing rooms. It has been actually proven that the steel construction created the feeling of much larger and lighter rooms. The builders themselves expressed surprise at the quality of spaciousnes achieved with each room in such a limited space.

The utilization of color in the house served the purpose of deliniating the structure rather than being put on as a one dimensional decorative effect. Here the house is seen in its spacial dimensions. Matt black for the structural steel—white for reflection of light on steel decking, yellow for all sliding doors and other non-structural metal having the same function (angles to anchor transparent or non-transparent) walls.

The house is radiant heated from pipes in the floor slab. The finished floors throughout the house are solid color vinyl tile — white in living, dining and kitchen areas—black in the rest of the house. Cabinets, bathroom walls and kitchen walls are made of mahogany, formica or painted masonite, depending upon

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their use.

Fiberglass screens on the outside make enclosed gardens and walk ways.

With the exception of loose chairs, the furniture, including couches, tables and beds, was designed by the architect, prefabricated and brought onto the job and set into place.

MODERN FREEWAYS

(From page 25)

as unusual title vestings.

It is in the 2% category, however, that the legal concepts of restriction of access rights are finally evolved; and it is in the judicial decisions that we find enunciated the law of the State as of the present time. I say, "as of the present time," for the law is a living, evolving, maturing creature, fashioned out of the needs of the people, and respondent to those needs. And, as judicial concepts of access restriction grow and change, so will our freeway systems become more adapted to the greatest good for the greatest number.

Conclusion

As a concluding commentary, it may be helpful to state that the great key to modern freeway development lies in the word "restriction," and the community planner, engineer, attorney and right of way practitioner of today are collaborating in a monumental task to meet the challenge of a world-on-wheels. Just as the citizen is encouraged to confine his energies into constructive channels in the prosecution of his daily activities; just as the social mores require certain behavior patterns; just as a community must accept discipline in order to achieve an orderly progression of accomplishments: So, modern freeways are based upon a new legal discipline which emphasizes control features. It is the confinement of vehicles within established lines, like the confinement of a river within its banks, which symbolizes the modern revolution in highway design.

It is this philosophy of Freedom Through Discipline which produces the modern freeway concept; and a proper understanding of this philosophy opens a new world of progress in Tomorrow's Community.

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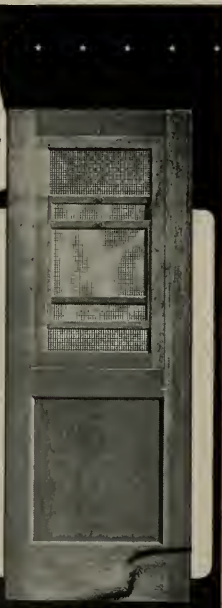

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ARCHITECTURAL FIRM ADDS TWO PROJECT DIRECTORS

Harry Saunders and Kaz Nomura have been made associates in the firm of A. Quincy Jones and Frederick E. Emmons, Architects and Site Planners, AIA, Los Angeles, according to a recent announcement.

PHOTO CREDITS: Gladding, McBean & Company, Page 6, 7, 10 (top and center); David P. Shelhamer, Page 8 (top), 9, 10 (bottom), 11, 13; David Shore, Page 12; Julius Shulman. Page 14 (top), 16, 17 (bottom), 18, 20; Raphael S. Soriano, AIA, Page 14 (bottom), 15, 17 (top); James H. Reed, Page 19; Ernest Braun, Page 21; Architectural-Industrial Photo Service, Page 22; George R. Wheeler, Page 32 (top); Ray Moulin, Page 32 (bottom).

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

THE HARDHATS. A Novel by H. M. Newell. Houghton Mifflin Co., 2 Park St., Boston. Price $4.00.

A story of six interesting years in the construction camp and the wide-open town that mushroomed around the site of the Mighty Squaw, one of the great northwestern dams. It is the story of what goes into building a great dam: cement, gravel, steel, sweat, engineering skill, personnel, and lives.

Large scale construction is one of the most vital aspects of expanding America, and the author (who has spent half a lifetime in the construction camps) captures all the romance and intrigues of today's frontier. Hardhats chronicles the arduous, dangerous work of men, women, and families who labor through bitter winters and broiling summers—for the job.

TIMBER FOUNDATION PILES—Pressure Treated. American Wood Preservers Institute, 111 W. Washington St., Chicago 2, Ill. Price $1.00.

An authoritative book of engineering information; comprehensive and well illustrated. It is filled with documented case histories including 1) pile driving formulae; 2) means of determining safe loads; 3) methods of solving problems of uplift and lateral forces; and 4) protective devices for use during driving. Other sections present excerpts from principal basic building codes; specifications of the ASTM for use in selecting timber piles; standards of the American Wood Preservers' Association for preservative treatment, and test pile driving and test loading. List of Institute members and guide to reliable sources of supply included.

ARCHITECTS YEAR BOOK 6. Frederick A. Praeger, Publishers, 105 W. 40th St., New York City 18, N.Y. Price $8.75.

Not only addressed to professional architects the Architects Year Book, edited by Trevor Dannatt, is a regular publication which is not concerned with the presentation of statistics, but lists names of trade developments. The book contains articles of original thought and of critical outlook stimulating to both the creative architect and to those who, less professionally involved, have an interest in the development of modern architecture and those subjects that affect or are affected by it.

Critical articles include a study of the work of the structural engineer P. L. Nervi by the Italian critic G. C. Argan, and a stimulating introduction by Ulrich Gasser. Town planning is critically examined by Paul Kriesis; Basil Taylor writes on English Art; Maxwell Fry discusses architecture abroad; Giuseppe Vaccaro studies the French paintings; E. Pillette writes on color in architecture; and numerous other outstanding persons' thinking and interpretations in the field of architecture are included in the book.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Water pressure reducing valves. New 4-page bulletin describes direct operated water pressure reducing valves; two models recommended especially for dead-end water service where flow is intermittent and subject to abrupt fluctuation; gives available sizes, initial pressures, reduced pressure ranges, water capacity in gpm, and typical application. Free copy write DEPT-A&E, Spence Engineering Co, Inc., Walden, New York.

Plastics. New 52-page catalog of thermoplastic and phenolic sheets, rods, tubes and films; miscellaneous resins, cements and supplies; includes comparison table of chemical, electrical and mechanical properties; lists available sizes, weights, color ranges, purchasing specifications and prices. Free copy write DEPT-A&E, Cadillac Plastic & Chemical Co., 15111 2nd Ave., Detroit 3, Mich.

Electric residential garage door. Illustrated brochure gives details of a new electrically operated residential garage door; push of button opens door, turns on light, closes door, turns out light; emergency release for manual operation in case of

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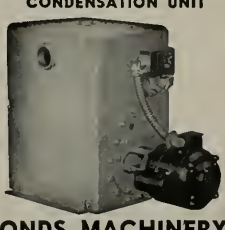

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Modern construction through engineering in wood. New 16-page catalog illustrates and describes the application of glulam members in various types of construction; churches, schools, homes, hangars and commercial buildings; design data for arches, girders, beams and purlins, as well as bowstring and parallel chord trusses; many uses of glued laminated timbers are profusely illustrated in black-and-white and color. Copies available write DEPT-A&E, Timber Structures, Inc., P.O. Box 3782, Portland, Ore.

Stainless Steel Curtain Walls. A new brochure (AIA FILE No 17-A) giving a report on the two summaries of the Princeton curtain wall study, prepared by John Hancock Callender, AIA, Research Associate, Princeton University. Many illustrations, charts, and drawings giving a wealth of information on the subject of stainless steel curtain walls. Write DEPT-A&E, United States Steel Corpn, 525 William Penn Place, Pittsburgh 30, Pa.

Water line noise eliminator. New brochure gives detailed description of construction of a wire reinforced rubber pipe designed to eliminate noise and vibration from water lines; size ½" to 12" ID; smooth inner lining of high-tension abrasion resisting rubber, walls impregnated wire reinforced fabric imbedded in rubber for full length, outer wall of abrasion, sun and weather resisting rubber; small pipes equipped with male iron pipe thread fittings; large sizes have integral full faced rubber flanges backed with either 150 or 300 lb. drilling steel flanges also imbedded in rubber. Free copy write DEPT-A&E, T. R. Finn & Co., Inc., 200 Central Ave., Hawthorne, New Jersey.

Sound control ceilings. Tectum acoustical ceiling panels (AIA, FILE No. 39-B) described in new brochure; gives basic design, installation detail, basic properties of 24"x48" panels; specifications, technical details. Copy available write DEPT-A&E, Tectum Division, Peoples Research & Mfg. Co., 156 6th St., Newark, Ohio.

Schools with Flexicore slabs. New 16-page booklet devotes 8-pages to plans and detail drawings of recent projects designed by outstanding architects; many illustrations; includes elementary and secondary school design; 1 and 2 story projects; drawings show typical usage; speeds construction, low maintenance cost. Free copy write DEPT-A&E, Flexicore Co., Inc., 1932 E. Monument Ave., Dayton 1, Ohio.

Grade guide for west coast lumber. New 4-page grade guide (AIA, FILE No. 19-A-1) covering Douglas fir, West Coast hemlock, Western red cedar, and Sitka spruce; brief description of lumber graded according to rules of the West Coast Lumber Inspection Bureau; specifications; illustration of Grade Stamps. Free copy write DEPT-A&E, West Coast Lumbermen's Ass'n, 1410 S. W. Morrison St., Portland 5, Oregon.

Airtemp air conditioning. New residential air conditioning catalog contains complete specifications on all Airtemp Summer and Winter models; valuable information for builders, architects, consulting engineers, contractors and homeowners planning either to modernize their heating systems or to add air conditioning. Write for Form 1-233, DEPT-A&E, Advertising & Sales Dept., Airtemp, 1600 Webster St., Dayton 1, Ohio.

Glass block and its functions. A new 24-page catalog (AIA, FILE No. 10-F) describes glass block and its functions; lists various glass block patterns, including light and solar heat controlling blocks; details of functional advantage of each specific pattern; instruction and construction details for both large and small size panel installations in steel, wood frame, brick or brick veneer construction; contains a convenient table of dimensions; section on how to calculate illumination and brightness; and tables on solar heat control and fuel savings. Copies available write DEPT-A&E, Kimble Glass Company, Toledo 1, Ohio.

Masonry chimney. Revised 8-page, 2-color booklet now available (AIA, FILE No 5-H) giving complete up-to-date information on the Van-Packer packaged masonry chimney; gives latest improvements, product information, applications, installation procedure, specifications and test data; UL listed for all fuels, all home heating plants and incinerators, and approved by all major building codes. Copy available write DEPT-A&E, Van Packer Corpn, Bettendorf, Iowa.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00. Cartage—Approx. $10.00 per M. Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

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BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	2.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 per bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White—1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ¼-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	3/4x2¼ $	½x2 $	⅜x2 $
Clear Otd., White	$425	$405	
Clear Otd., Red	405	380	
Select Otd., Red or White	355	340	
Clear Pln., Red or White	355	340	335 315
Select Pln., Red or White	340	330	325 300
#1 Common, red or White	315	310	305 280
#2 Common, Red or White	305		

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390.00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to Glass Blocks, set in place	.30 per □ ft. 3.50 per □ ft.

HEATING—

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x8' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry, 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whitewashing	per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless,
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile
Scored ..... F.O.B. S. F.
12 x 12, each ..... $ .17

Kraftile: Per square foot Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x 7/8-inch, plain	$ .28	$ .253
6 x 12 x 7/8-inch, plain	.295	.265
6 x 6 x 7/8-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00
Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

XPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and ddresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch r district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or epresentativa, may be found.

DHESIVES (1)
'all and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

IR CONDITIONING (2)
ir Conditioning & Cooling
UTILITY APPLIANCE CORP.
Las Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

RCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, UN 01268
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

RCHITECTURAL VENEER (3)
eramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
orcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station
ranite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
larble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DOORS (12)
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8202
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188
Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	E2.86	C2.835	E2.86	O2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
O $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		Scv	Scv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%Prom	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	11½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½% ¼%Prom				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table 1.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

OFFICE & PROCESSING BLDG., Mt. Eden, Alameda county. Mt. Eden Nursery Co, Inc., Mt. Eden, owner. 1-Story reinforced concrete tilt-up construction, wood roof and trusses; 29,000 sq. ft. floor area — $120,000. ENGINEER: Simpson & Stratta, San Francisco. GENERAL CONTRACTOR: Johnson & Mape Const. Co., Menlo Park.

MEDICAL BLDG, Santa Monica, Los Angeles county. Revere Const'n Co., Los Angeles, owner. 2-Story brick and plaster medical building, composition roofing, wood roof, concrete slab and wood floors, sound insulation, refrigerated air conditioning, acoustical tile ceilings, plumbing, electrical, metal sash, stone veneer, black carrara spandrels, asphalt paving; 20,000 sq. ft. floor area; 25 suites, physical therapy section, clinical and X-ray laboratories and prescription pharmacy. ARCHITECT: Herman C. Light, Los Angeles.

PAROCHIAL SCHOOL, St. Joseph's, Cupertino, Santa Clara county. Roman Catholic Archbishop, San Francisco, owner. Frame and stucco construction; 5-classrooms, toilet rooms, administration facilities—$105,500. ARCHITECT: Henry V. Chescoe, San Francisco. GENERAL CONTRACTOR: John A. Pursley, Cupertino.

SHOPPING CENTER, West Covina Plaza, West Covina, Los Angeles county. National Dollar Store, West Covina, lessee. Reinforced masonry construction, structural steel, composition roofing, concrete slab, terrazzo and asphalt tile floors, metal sash, plastering, acoustical work, plate glass, toilets, electrical, plumbing. ARCHITECT: Carl Maston, Los Angeles. GENERAL CONTRACTOR: Ernest W. Hahn, Hawthorne.

ELEMENTARY SCHOOL ADD'N, Olive Ave., Novato, Marin county. Novato Unified School District, Novato, owner. Frame and stucco construction; 7,679 sq. ft. floor area; 16,000 sq. ft. asphalt paving; 6-classrooms, toilets — $108,720. ARCHITECT: John Lyon Reid & Partners, San Francisco. GENERAL CONTRACTOR: Henry Bormolini, Novato.

BANK BLDG ADD'N, Las Vegas, Nevada. First National Bank of Nevada, Las Vegas, owner. Reinforced concrete and masonry construction, composition roofing, ceramic tile work, insulation, slab floor, metal sash, acoustical, plastering, air conditioning, electrical, plumbing; 135x32 ft — $128,635. ARCHITECT: Ferris & Erskine, Reno. GENERAL CONTRACTOR: Sierra Const'n Co., Las Vegas, Nevada.

SCHOOL ADD'N, Blue Lake, Humboldt county. Blue Lake Elementary School District, Blue Lake, owner. Frame construction, 4-classrooms — $79,217. ARCHITECT: Gerald D. Matson, Eureka. GENERAL CONTRACTOR: Glover Const'n Co., Santa Rosa.

PROFESSIONAL BLDG, Long Beach, Los Angeles county. Naples Medical Group, Naples, owner. Frame and stucco construction, concrete slab, asphalt tile, vinyl, terrazzo, composition and gravel roofing, aluminum sash, fixed plate glass, plaster interior, ceramic tile, laminated plastic, masonite, plywood screen partitions, wood cabinets and black-top paving; 4800 sq. ft. floor area. ARCHITECT: Francis O. Merchant and J. Richard Shelley, Long Beach. GENERAL CONTRACTOR: Ralph G. Peterson, Long Beach.

HIGH SCHOOL, Southside, Bakersfield, Kern county. Kern County Unified High School District, Bakersfield, owner. Reinforced concrete, structural steel roof trusses, air conditioning, steel sash, plywood partitions, aluminum door, porcelain enamel metal lockers; administration, 4-classrooms, science rooms, study hall, library, boys and girls gymnasium, cafeteria, auditorium, music room, shops—$2,813,000. ARCHITECT: Ernest L. McCoy, Bakersfield. GENERAL CONTRACTOR: Tumblin Co., Bakersfield.

CHURCH ADD'N, Hawthorne, Los Angeles county. Calvary Presbyterian Church, Hawthorne, owner. 2-Story frame and plaster addition, built-up roofing, concrete slab, asphalt tile, electrical, toilets, gas wall heaters, steel pipe columns, wood sash, cabinet work; 3100 sq. ft. floor area —$38,844. ARCHITECT: Martin Fuller, Hawthorne. GENERAL CONTRACTOR: Spike Contruction Co., Inglewood.

FELLOWSHIP HALL, Fresno. St. Pauls Methodist Church, Fresno, owner. Structural steel frame, and frame and stucco, composition roof, construction; 4-classrooms — $89,550. ARCHITECT: Horn & Mortland, Fresno. GENERAL CONTRACTOR: Long & Needham, Fresno.

MISSILE MFG. BLDG, Sunnyvale, Santa Clara county. Lockheed Aircraft Corpn, San Jose, owner. 1-Story reinforced concrete, tilt-up walls, rigid steel frame, gypsum roof deck; 96,000 sq. ft. area. ENGINEER: Ralph M. Parsons Co., Los Angeles. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

INDUSTRIAL BLDG., Maywood, Los Angeles county. Wylde & Sons, Maywood, owner. 1-Story concrete tilt-up exterior wall, composition roofing, tapered steel beams, steel sash, wood overhead doors, aluminum front entrance, masonry veneer, concrete slab floor, toilet facilities, asphalt concrete paving; 75x95 ft.—$40,000. ARCHITECT: Raymond D. Conwell & Associates, Los Angeles. GENERAL CONTRACTOR: Concrete Construction Service, Inc., Gardena.

CONVENT & CLASSROOM BLDG. St. Pius V Parish, Buena Park, Los Angeles county. Roman Catholic Archbishop of Los Angeles, owner. 2-Story frame and brick veneer convent will contain 5000 sq. ft. floor area; rock roof, oak and linoleum floors, forced air heating, steel sash, interior plaster, toilet facilities, ceramic tile work, built in gas oven and range, asphaltic paving; 4-classrooms, 5400 sq. ft. area, masonry construction, composition roofing, concrete and asphalt tile floors, space heaters, interior plaster, steel sash, toilet facilities—$125,924. ARCHITECT: Carlson and Mibblebrook, Garden Grove. GENERAL CONTRACTOR: Ogden Markel, Santa Ana.

SINGLE MEN'S HOME, French Camp, San Joaquin county. County of San Joaquin, Stockton, owner. 3-Dormitories for indigent and aged; 1-story, frame and stucco construction — $120,865. ARCHITECT: Warren T. Wong, Stockton. GENERAL CONTRACTOR: Craft Const Co., Stockton.

STATE OFFICE BLDG, Carson City, Nevada. State of Nevada, Carson City, owner. 3-Story, plus basement, reinforced concrete, aluminum sash, vinyl tile and terrazzo floors—$793,827. ARCHITECT: Lockard & Cassozza, Reno. GENERAL CONTRACTOR: W. W. Wiechmann Const Co., Reno, Nevada.

CHURCH, Visalia, Tulare county. First Presbyterian Church of Visalia, owner. Frame and stucco construction—$58,000. ARCHITECT: Loyd Fletcher, Visalia. GENERAL CONTRACTOR: Remco Const Co., Avenal.

OFFICE & LAB. Santa Fe Springs, Los Angeles county. General Petroleum Corp., Los Angeles, owner. 1-Story frame and stucco, concrete block office and laboratory facilities in 3-units; composition roofing, concrete floor, asphalt tile floor covering, painting, plastering, plumbing, electrical work, heating and ventilating, structural steel, acoustical, ceramic tile; 38,000 sq. ft. floor area. ARCHITECT: Albert C. Martin & Associates, Los Angeles. GENERAL CONTRACTOR: P. J. Walker Co., Los Angeles.

MARKET, Reedley, Fresno county. Albert Hagopian, Fresno, owner. Contract was awarded for $65,571. CIVIL ENGINEER: Braun & Pasillas, Fresno. GENERAL CONTRACTOR: Clarence Ward Constn Co., Fresno.

CHURCH, Downey, Los Angeles county. Christ Lutheran Church, Downey, owner. Frame and stucco construction; composition roofing, concrete slab, plaster walls and ceilings, plumbing, electrical; 3500 sq. ft. in area. ARCHITECT: Orr, Strange & Inslee, Los Angeles. GENERAL CONTRACTOR: Hann Const. Co., Compton.

LAW OFFICE, Visalia, Tulare county. McCormick & Houk, Visalia, owner. 1-Story, frame and stucco construction—$37,480. ARCHITECT: James P. Lockett, Visalia. GENERAL CONTRACTOR: Chester & Alexander, Visalia.

MEDICAL BLDG, Oakland, Alameda county. Dr. Walker, Oakland, owner. 2-

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Story, part basement, frame and stucco construction, some brick veneer; 8000 sq. ft. of area — $105,400. ARCHITECT: Donald L. Hardison, Richmond. GENERAL CONTRACTOR: Jas. B. Peterson & Son, Oakland.

FACTORY: Puente, Los Angeles county. Isley Mfg. Co., Puente, owner. Steel frame, tilt-up concrete and glass walls, steel beams, composition roofing, gypsum roof deck, concrete slab and asphalt tile floors, steel sliding doors, steel acoustical panels, plumbing, electrical, sheet metal, air conditioning; spur track, asphalt paving; 90,000 sq. ft. in area (12,000 sq. ft. for office). ARCHITECT: George Vernon Russell, Los Angeles. GENERAL CONTRACTOR: MacIsaac & Menke, Los Angeles.

CARD PLANT & POWER HOUSE. San Jose, Santa Clara county. International Business Machines Co, San Jose, owner. 1-Story reinforced concrete and structural steel construction — $1,376,000. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: Carl N. Swenson, San Jose.

SHOPPING CENTER, Modesto, Stanislaus county. Roosevelt Shopping Center, Modesto, owner. 1-Story frame and stucco construction; 5-stores, doctors offices; 10,000 sq. ft. in area — $117,900. ARCHITECT: John W. Bomberger, Modesto. GENERAL CONTRACTOR: Spears Const Co., Modesto.

ELEMENTARY SCHOOL, Strawberry Park, Campbell, Santa Clara county. Moreland Elementary School District, Campbell, owner. Frame and stucco construction; administration facilities, 12-classrooms, 2-kindergartens, toilets—$304,922. ARCHITECT: Clark & Stromquist, Palo Alto. GENERAL CONTRACTOR: Gresham Const Co., Santa Clara.

WAREHOUSE, Emeryville, Alameda county. John Breuner Co, Oakland, owner. Addition of a mezzanine to present building, reinforced concrete construction — $69,800. ARCHITECT: Alben Froberg, Oakland. GENERAL CONTRACTOR: Christensen & Lyons, Oakland.

RESTAURANT, Santa Monica, Los Angeles county. Friars Restaurant, Santa Monica, owner. Reinforced brick, flagstone and stone veneer, composition roofing, wood roof construction, concrete slab, terrazzo and quarry tile floors, aluminum frame plate glass entrance doors, plaster walls, acoustical tile ceilings, air conditioning, plumbing, electrical, plate glass; 2800 sq. ft. in area. ARCHITECT: Kooper & Maybach, Curtis C. Maybach, architect, Los Angeles. GENERAL CONTRACTOR: John Volz and H. Rappaport, Santa Monica.

NEW ELEMENTARY SCHOOL, Edgemont, San Bruno, San Mateo county. San Bruno Park Elementary School, San Bruno, owner. Administration, 2-kindergartens, 4-classrooms, toilet rooms, demolition of existing buildings on site—$251,686. ARCHITECT: Ernest J. Kump, Palo Alto. GENERAL CONTRACTOR: Pacific Comm. Bldrs, Menlo Park.

MARKET, Covina, Los Angeles county. Market Basket, Covina, owner. Brick masonry market building; bow string trusses, composition roofing, concrete slab, asphalt tile and terrazzo floors, plastering, electrical, plumbing, air conditioning, sheet metal, hollow metal doors, automatic entrance doors, tile facing, porcelain enamel steel pylons, asphalt paving—$268,961. ARCHITECT: H. W. Underhill, Los Angeles. GENERAL CONTRACTOR: Berry & Paul Const Co., Ontario.

FRATERNITY BLDG, Zeta Psi, Berkeley, Alameda county. Zeta Psi Fraternity, Berkeley, owner. 2-Story, and basement, wood frame and structural steel construction—$236,988. ARCHITECT: Warnecke & Warnecke, Oakland. GENERAL CONTRACTOR: Marvin E. Collins, El Cerrito.

OFFICE BLDG, Van Nuys, Los Angeles county. Farmers Insurance Group, Los Angeles, owner. 2-Story brick and concrete, composition and gravel roof, quarry tile, asphalt tile, ceramic tile, rubber tile, terrazzo and concrete floors, interior plaster, wood paneling, acoustical tile, air conditioning, metal toilet partitions, cafeteria, dumb-waiter, pipe columns, tapered steel girders, chain operated aluminum doors, concrete patio, asphalt concrete paving, metal louvers, steel projected and fixed plate glass; 352x132 ft. ARCHITECT: Douglas McLellan & John Fortune, Los Angeles. GENERAL CONTRACTOR: C. L. Peck, Los Angeles.

JOCKEY BLDG, County Fairgrounds, Vallejo, Solano county. Solano County Board of Supervisors, Fairfield, owner. 1-Story concrete block and frame construction—$31,764. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Marshall Kent, Napa.

GYMNASIUM, High School, Patterson, Stanislaus county. Patterson Union High School District, Patterson, owner. Structural steel frame, reinforced concrete, concrete floors covered with asphalt tile and maple — $271,690. ARCHITECT: David H. Horn, Fresno. GENERAL CONTRACTOR: H. L. Hansen & Sons, Fresno.

MUSIC BUILDING, Stanford University, Palo Alto. Santa Clara county. Stanford University, Palo Alto, owner. 1-story, reinforced concrete construction $400,000. ARCHITECT: Ambrose & Spencer, San Francisco. GENERAL CONTRACTOR: Wagner & Martinez, San Francisco.

HIGH SCHOOL ADD'N, Folsom, Sacramento county. Folsom Unified School District, Folsom, owner. Multi-purpose, music and kitchen addition; frame and stucco construction—$103,786. ARCHITECT: Koblik & Fisher, Sacramento. GENERAL CONTRACTOR: Guth & Schmidt, Sacramento.

OFFICE & WAREHOUSE, Burlingame, San Mateo county. Sylvania Electrical Products, Inc., Williamsport, Pa, owner. Steel frame and reinforced concrete construction—$499,400. ARCHITECT: John S. Bolles, San Francisco. GENERAL CONTRACTOR: Associated Const & Engineering Co, San Francisco.

CHURCH, Garden Grove, Orange county. Christian Missionary Society of Southern California, Los Angeles, owner. 2-Story frame and stucco church building, composition roofing, metal sash, concrete slab and wood floors with asphalt tile covering, interior plaster, forced air heating, ceramic tile, plumbing and electrical work; 5200 sq. ft. of floor area. ARCHITECT: Arthur W. Angel, Montebello.

TELEPHONE HEADQUARTERS BLDG, Menlo Park, San Mateo county. George N. Frykberg, Palo Alto, owner. 1-Story reinforced concrete and frame construction; 14,000 sq. ft. of area—$150,000. ARCHITECT: Paul James Huston, Palo Alto. GENERAL CONTRACTOR: R. F. Royden, San Mateo.

EXHIBIT BLDG, 4th District Fair Grounds, Petaluma, Sonoma county. State of California, Sacramento, owner. Metal frame, aluminum roofing, wood siding, wood roof, ventilators, hollow metal doors, wood frame walls, concrete drilled foundations, concrete slab, plywood and fiberboard interior finish; grading, electrical and mechanical work — $53,756. GENERAL CONTRACTOR: Payne Const Co, Oakland.

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IN THE NEWS

BRICKLAYER CHAMP GOES TO NEASHAM

Robert G. Neasham, 22 year old apprentice from Santa Clara, California, won the award for being the Champion Bricklayer Apprentice of 1956 at the Union-Industries Show recently held in Seattle, Washington.

Neasham won out over 37 other young apprentices from the United States and Canada who participated in the 8th annual Bricklayers Apprentice Competition which is sponsored by the Bricklayers, Masons & Plasterers International Union. Besides his title, Neasham was presented with a $500 cash prize, and in addition receives an expenses paid vacation as the guest of the Structural Clay Products Institute to Boca Raton, Florida.

Second prize went to Billy Mac Terry of Englewood, Colorado, and third prize was awarded to Roy Fox of Yakima, Washington.

The competition is strongly supported by the Mason Contractors Association of America, the Structural Clay Products Institute and other construction industry groups.

MEDICAL BUILDING

Mechanical Engineer Wilfred W. Davies of San Carlos and Civil Engineer Robert L. Smart, also of San Carlos, are preparing preliminary drawings for construction of a Medical Building to be built in the Stanford Professional Area at Palo Alto at an estimated cost of $120,000.

The building will be of one-story, frame and stucco construction and will contain some 10,000 sq. ft. of floor area.

AMERICAN RIVER JUNIOR COLLEGE

The architectural firm of Barovetto & Thomas of Sacramento is preparing drawings for construction of the new American River Junior College to be built near the City of Sacramento for the American River Junior College District in Del Paso Heights.

The new school facilities will include an administration, classroom, science, homemaking, cafeteria, library, gymnasium, arts and crafts, shop, toilet rooms, and will be of frame and stucco construction.

Estimated cost of the new building is $5,000,000.

CONVENTION HALL PLANS

Architect Harry A. Bruno of Oakland is completing drawings for construction of a Convention Hall to be built in the famed Jack London Square of Oakland for the Port of Oakland Authority.

The new building will be 100 x 200 feet, 1-story in height, and will be of concrete block with structural steel frame construction. It will also have a metal roof deck and an automatic sprinkler system. Estimated cost of the project is $250,000.

LOS ANGELES ARCHITECTS DESIGN MICHIGAN CENTER

Architects A. Quincy Jones and Frederick E. Emmons, AIA, of Los Angeles, designed one of the homes to be built for the Homestyle Center Foundation, Inc., a permanent exhibit in Grand Rapids, Michigan.

Jones and Emmons are among 20 of the nation's outstanding architects chosen to design homes for the unusual new research village, one of the most comprehensive projects of its kind to display new ideas in home architecture and design. Each year ten architects will create new homes to be added to the center. Homes will be constructed, landscaped and furnished to depict all types of residential architecture representative of the regions from which the architects are selected. The homes will remain unoccupied and open for display on a year-long basis.

Each home represents the result of a four-part professional team, including architect, builder, landscape architect and interior designer. Cooperating with Jones and Emmons were Joseph L. Eichler, builder; Eckbo, Royston and Williams, landscape architects; and Harry Saunders, interior designer.

GYMNASIUM BUILDING

Architect Floyd B. Comstock of Walnut Creek is preparing preliminary drawings for the construction of a Gymnasium building for the San Ramon Valley Union High School District, Danville.

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LIBRARY FOR MONROVIA

Eugene Weldon Fickes, Jr., Monrovia, and Jay Dewey Harnish of Ontario, associated architects, are completing plans and specifications for construction of a new library at Monrovia for the City of Monrovia.

The new building will be 1-story and will contain 12,000 sq. ft. of floor area.

LIBRARY BONDS APPROVED

Voters of the City of Menlo Park recently approved the issuance and sale of $120,000 in special Library Bonds to construct a 1-story, 5,540 sq. ft. frame and concrete library building in Menlo Park.

Architect for the project is Kingsford Jones of Menlo Park.

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OFFICE, SALES AND WAREHOUSE

Architect Albert C. Martin & Associates of Los Angeles are completing plans and specifications for construction of an Office, Sales and Warehouse Building for General Electric Company, to be built in the Millsdale Industrial Tract near Burlingame.

The new building will contain 130,000 sq. ft. of area: will be 1-story, reinforced tilt-up construction, structural steel, wood roof, steel roof deck over office, and concrete floors.

LARGE SUBDIVISION FOR ORANGE COUNTY

The largest single housing subdivision ever to be built in California's Orange County has been started in the Long Beach-Garden Grove area, and when completed will represent a community the size of an average town.

The 400 acre site will provide for 1700 new homes, a complete shopping center, and other buildings which will represent a cost of $24,000,000.

MEDICAL BUILDING

The firm of Davis & Ferguson, architects and engineers of Van Nuys, is completing drawings for construction of a Medical Building in Northridge.

The three-suite masonry building will have a composition roof, concrete slab floor, intercommunicating system, metal sash, forced air heating, office and laboratories, reception room and a pharmacy containing 2500 square feet.

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NEW CITY HALL AND POLICE STATION

The architectural firm of Ernest Kump & Associates of Palo Alto is preparing drawings for construction of a new City Hall and Police Station to be built in the City of Los Altos for the City of Los Altos.

The new city facilities will be of reinforced concrete construction.

CHURCH AND SUNDAY SCHOOL AND HALL

Architect Leslie I. Nichols of Palo Alto is preparing drawings and specifications for construction of a new Church, Sunday School and Social Hall to be built for the Congregational Church in Santa Cruz.

The new facilities will be of frame and masonry construction with a shake roof and will cost an estimated $600,000.

CANDY FACTORY FOR SOUTH SAN FRANCISCO

See's Candy Company has announced it will soon construct a new candy factory in South San Francisco at an estimated cost of $500,000.

The new plant will be 1 and 2 story, reinforced concrete tilt-up construction, wood roof, and will contain 60,000 sq. ft. of floor area.

Architect J. Francis Ward is the architect.

AUTO CLUB BUILDING

The Inter-Insurance Exchange of the Automobile Club of Southern California has acquired a site in San Gabriel and will erect a 4700 sq. ft. concrete building, asphalt tile covered floors, air conditioning and a paved parking area.

Architects Weimer & Fickes, Arcadia, are preparing plans and specifications.

GIRLS' GYMNASIUM FOR BURBANK HIGH

The architectural firm of Smith, Powell and Morgridge of Los Angeles is completing working drawings for construction of a new girls' gymnasium at Burbank High School, Burbank, for the Board of Education of the Burbank Unified School District.

The building will be poured reinforced concrete, steel framing with lightweight concrete roof deck, composition roofing, basement with locker and shower facilities, maple gymnasium flooring, forced air heating and suspended heaters, steel sash, acoustical tile, ceramic tile, and the work will include demolition of a present building on the site.

Estimated cost of the work is $125,000.

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ROBINSON BRICK COMPANY ELECTS NEW DIRECTORS

Charles C. Gates, Jr., executive vice-president of the Gates Rubber Company of Denver, and John L. J. Hart, director of the United States National Bank; Kenneth E. Linscott, Boettcher & Company; William W. Robinson, president; and F. George Robinson, vice-president, have been elected directors of the Robinson Brick and Tile Company of Denver.

MEDICAL OFFICE BUILDING

Fred M. Briggs, architect of Laguna Beach, is completing drawings for construction of a 2-story frame and stucco medical office building on Ventura Blvd., Woodland Hills.

The building will contain 3000 sq. ft. and parking provision for 12 cars.

NEW JAIL AND POLICE STATION

Architects Ingle & Weaver of Ukiah and Victor Abrahamson of San Francisco are working on preliminary drawings for the construction of a new Jail and Police Station to be built in Ukiah for the City of Ukiah.

The building will be 1-story, concrete block and frame construction and will cost an estimated $150,000.

ACME STEEL COMPANY APPOINTS R. R. WARNS

Robert R. Warns has been appointed Supervisor of the Los Angeles district office of the Dexion Division of Acme Steel Company of Chicago, according to an announcement by P. L. Dafoe, manager of the division.

Warns joined the Dexion Division in 1954 as a salesman in the New York City area.

GENERAL CONTROLS NEW SAN FRANCISCO PLANT

General Controls Company has announced construction of a new building at 600 Bryant street, San Francisco, that will, when completed, increase present facilities in the Bay Area by 120 per cent, according to William A. Ray, company president.

Of modern, functional design, with offices located on a level above the auto driveway, the new building will provide test facilities. Manufacturing plants are maintained in Glendale and Burbank; Skokie, Illinois; Iron Mountain, Michigan; and Guelph, Canada.

DEPARTMENT STORE

Architect David T. Johnson of Oakland, is completing preliminary drawings for construction of a 2-story, reinforced concrete department store building in the Palma Ceia Shopping Center near Hayward for Kahn's Department Store of Oakland.

The new building will contain 160,000 sq. ft. of floor area; air conditioning, escalators and elevators. Estimated cost is $3,000,000.

NEW HIGH SCHOOL FOR CORNING

Architect Harold Gimeno of Santa Ana, is completing drawings for construction of a new high school to be built in Corning, California.

The new school plant will include administration building, classrooms, band room and gymnasium, shower and locker rooms, and toilet rooms.

PROFESSIONAL BUILDING

Architects Rowland & Associates, Fred V. Johnston, Architect, are completing preliminary drawings for construction of a 1-story professional building in Anaheim, for Dr. R. E. Wineland.

The building will be frame and stucco, wood floors, composition roof, plaster interior, air conditioning, forced air heating; contain 4,200 sq. ft. of floor area and cost an estimated $50,000.

ELEMENTARY SCHOOL

Architect Amos Randall and Associate Don I. Yinger of Pomona, are preparing working drawings for construction of a new elementary school plant to be known as the North San Antonio Elementary School and to be built in Pomona.

The new plant will contain 12-classrooms, 2-kindergartens, cafetorium, administration building and connecting corridors.

COMBINATION OFFICE APARTMENT BUILDING

Cameron, Stafford, Duncan, Inc., have announced plans for construction of a 15-story, Class A, structural steel frame, and reinforced concrete constructed combination office, store and apartment building for Reno, Nevada.

The work will include excavation for a basement garage.

AIR FORCE HOUSING

Architects Abram & Dickstein of Sunnyvale, are working on drawings for construction of a 500-unit air force housing project to be built under the Capehart Act at the Travis Air Force Base near Fairfield in Solano county.

The units will be 1-story, 3 and 4 bed-

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room, and of frame and stucco construction. Estimated cost of the work is $6,750,000.

TECHNICAL SCHOOL

Architect Pierre Claeyssens of West Los Angeles, is completing plans for construction of a frame and stucco Technical School at Santa Monica City College in Santa Monica, for the Santa Monica Board of Education.

RESTAURANT BUILDING

Irving Caster of San Mateo is completing plans for construction of a new restaurant building in San Mateo which will contain 3,000 sq. ft. of floor area; 1-story; frame and stucco construction.

FELLOWSHIP HALL AND CLASSROOMS

The architectural firm of Orr, Strange & Inslee, Los Angeles, is preparing plans for construction of a frame and stucco fellowship hall and classrooms, in Granada Hills, for the Dennis Park Presbyterian Church.

Construction will be concrete slab and asphalt tile floors, plaster walls and ceilings, steel sash, forced air heating, and will contain 5,000 sq. ft. of floor area.

GENERAL MOTORS ASSEMBLY PLANT

General Motors Corpn of Detroit, Michigan, has acquired a site near Sunnyvale in Santa Clara county, and announced construction will soon start on a new General Motors Assembly Plant.

A 1-story, structural steel frame, brick and glass construction; 1,500,000 sq. ft. floor area plant will provide facilities for assembly of Buick, Oldsmobile and Pontiac automobiles.

FRATERNITY BUILDING

The architectural firm of Ratcliff & Ratcliff, Berkeley, is starting working drawings for construction of a 3-story, frame and stucco Fraternity building to be built in Berkeley by the Phi Kappa Sigma Fraternity.

ARCHITECT SELECTED

The architectural firm of Beland & Gianelli of Vallejo, has been commissioned by the Contra Costa Board of Supervisors, to draft plans and specifications for construction of a new branch county office building in Pittsburg's new Civic Center.

The new building will contain 20,000 sq. ft. of floor area.

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ACTION

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Vol. 205 No. 3

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COVER PICTURE

OUTDOOR LIVING

A Way of Life

Casual outdoor areas can be interesting as well as contributing to the pleasure of any home.

The article on page 10 deals with outdoor living in the Pacific Northwest.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

DESIGN FIRE SAFETY

Someone, probably in the insurance business, has stated that "Fire prevention begins on the drawing board."

This is not merely a cliche. It is a meaningful phrase which is given active credence by a great many architects, engineers and builders and the effectiveness of their consideration and planning is proven by statistics which show that fire losses are on the wane on the national level. True, actual fire loss figures are higher than they were a decade ago, but in proportion to the dollar volume of existing structures which has increased logarithmically during the construction records of the past few years, fire loss figures are actually on the downgrade.

With the increasing complexity of present-day technical building installations, architects, engineers and builders are recognizing more and more the necessity for calling upon the experience of fire protection engineers in designing fire safety into their buildings.

Another important factor in the reduction of fire loss is the proper use of the proper building material in the proper place. Building material manufacturers have kept well ahead of today's needs for added safety by producing new building materials to meet new conditions and uses in every phase of the construction industry.

* * *

Tax revision and reduction topped the list of legislative issues in a recent survey among 4,800 businessmen.

* * *

END OF GI HOME LOANS

A cut-off, now scheduled, of the GI home loan program for next year will have an unusually heavy impact on the home building industry and may have repercussions throughout our entire economy.

A careful review of the situation shows the consequences of allowing the law to terminate on July 25, 1957, will mean a severe disruption of home building in many areas and a sharp cutback in total housing production. It is well to remember that in 1955 GI houses accounted for more than 30 per cent of the 1.33 million residential starts.

The building of fewer homes touches off a chain reaction both in the community and our general economy. It adversely affects labor, manufacturers, suppliers, retail merchants and lending institutions as well as home builders. And, of course, if the law expires hundreds of thousands of World War II veterans now in their early thirties will lose the entitlements at a time when they would be most valuable.

Reports indicate Congress may ignore the recommendations of veterans groups and others to extend the GI housing benefits to July 1960. Those benefits include low down payments on government guaranteed home loans and a 4½ per cent rate. The House of Representatives has voted a one year grace period for contract-backed GI applications in process at the time the law expires, but no action has been taken by the Senate.

It is almost certain that the elimination of the GI program in 1957 would restrict housing aids at the very time when liberal terms are most needed. The adverse effects will be far greater than they would have been in the immediate post-war years when housing was in drastically short supply, or will be in the 1960's, and here is why:

The period 1955 through 1960, which we are in now, is one when the low birth rates of the 1930's show up in a lower net family formation. The number of new families formed in this period certainly will be below the 1950-1955 level. And, of course, the rate of family formation has a significant bearing on the housing market.

It then follows that the relatively low rate of new family formation is now a negative factor in the housing market. Furthermore, it will continue to be until the 1960's when a new surge in family formations, the result of the high birth rates during the war and immediate post war years, will set in.

In the years immediately following the war, net nonfarm household formation rose to about 1.5 million. In 1950 the rate was 1.6 million, but then a decline set in and by 1955 it had fallen to about 850,000 per year and should continue at this approximate level, or slightly lower, for the rest of the decade.

* * *

1,700,000 businessmen voted, in a recent nation-wide referendum, that the federal government should bear most of the cost of expanding and modernizing the interstate highway system of the nation, but urged pay-as-you-go financing. How? Increases in excise and motor fuel taxes on highway users.

* * *

UNSCRAMBLING THE EGGS

Too often, we tend to think of a nationalized industry as permanently removed from the competitive forces of a market economy. This is not always the case. Reprivatization is both possible and feasible, as demonstrated by the recent sales of the United States government synthetic rubber plants.

However, it is much easier to scramble than to unscramble eggs. Nationalization, the planners say, can be accomplished simply by passing a law. Denationalization often raises complex and controversial problems, and experience is proving that it is much easier to get the Federal government "into" than "out" of business-type activities.

STRAWBERRY POINT

Marin County California

On San Francisco Bay

GOLDEN GATE

BAPTIST THEOLOGICAL SEMINARY

MARIN COUNTY, CALIFORNIA

JOHN CARL WARNECKE, A.I.A.
Architect

Ground breaking for the extensive site grading is progressing according to schedule on the 126 acre site of the new multi-million dollar Golden Gate Baptist Theological Seminary, which is located on Strawberry Point, a portion of rolling, hilly land that extends well into San Francisco Bay in Marin County.

The large Seminary will occupy one of the most prominent sites in the entire San Francisco-Oakland Bay Area, and an area that was once seriously considered as a possible location for the permanent United Nations Headquarters, which after due consideration was subsequently erected in New York City.

The vast campus is being planned to provide accommodations for from 1200 to 1500 students, many of whom are married and will live with their families on the Seminary grounds. A wide variety of types of modern housing have been planned; from spacious dormitories, to compact multi-family units. The main building will include the Administration and Academic buildings, a large library, a student center, a completely modern cafeteria, diversified recreational and other pertinent facilities.

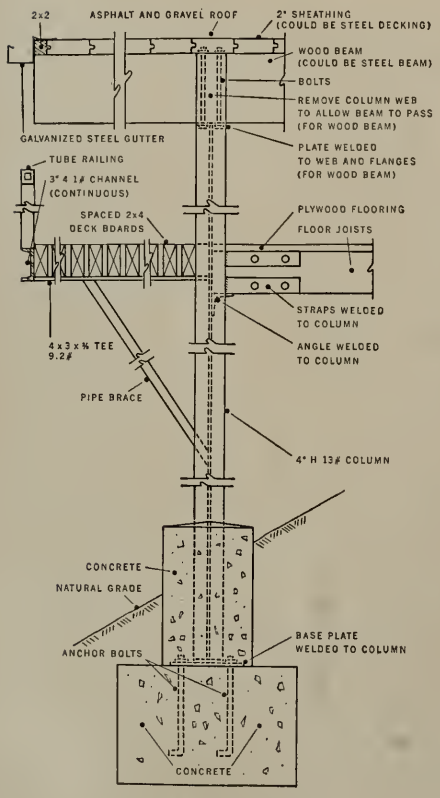
When completed the Golden Gate Seminary will be one of five such large institutions maintained and administered by the Southern Baptist Convention.

A United States Steel report covering two more steel homes

Steel is at home on a hillside, too

Strength, precision, stability, permanence—these are some of the qualities that make steel a unique home-building material. And nowhere are these advantages of more value than in hillside construction. To get the most out of an elevated lot, a home wants to be open and glassy. With a steel frame, the architect can design a completely open, flexible plan unrestricted by conventional building methods. The steel homes featured here have no load-bearing walls—the steel frames are designed to withstand all lateral and horizontal forces. Thus the ceiling deck "floats" free of interior partitions. Steel framework also minimizes the need for leveling hillside property prior to building.

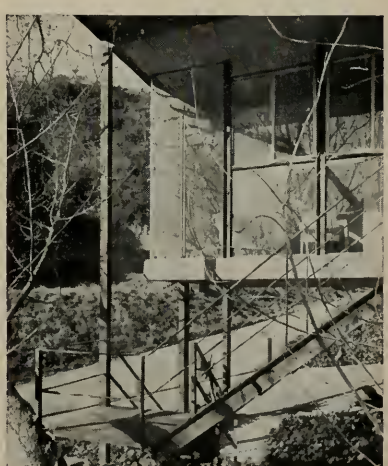
In Southern California, designer Craig Ellwood recently completed his fifth hillside home using a modular rigid frame composed mainly of 4" 13# H steel columns. In the pictures notice how he integrates structure and design: the rhythmic steel frame is the basis of the architectural expression. Exposed trim steel columns dramatize the structure with precision detailing that gives modern architecture its crisp, elegant look (cost of furring and wrapping of columns is also eliminated).



TYPICAL SECTION

Craig Ellwood's fifth hillside steel home illustrates how he uses individual concrete pads to eliminate costly continuous footings and allow openness of structure. Floor is supported by 6" 8.2# steel channels. The 1" square bars used for tie rods (diagonal bracing at right) eliminate the need for solid shear walls.

This home, the first hillside-design created by Ellwood using a modular steel frame, was built in 1952. Today, this 1400 sq. ft. house could be built for about $12.50 per square foot—including built-in appliances. The owner of this steel-framed home is forever protected against termites as well as warping and checking. Steel is permanent...and needs little upkeep.



ARCHITECTS & ENGINEERS: If you are interested in receiving more information on the use of United States Steel in residential construction, please send us your name and address, and we will forward the material when it becomes available. Write: Architects & Engineers Service, Room 1520, United States Steel Corporation, **Columbia-Geneva Steel Division,** 120 Montgomery Street, San Francisco 6, California.

The United States Steel shapes used in these homes are sold by steel jobbers in your locality.

Designer:
Craig Ellwood, Beverly Hills

Steel Erection:
Abraso Welding Works, Los Angeles

rn homes of the future are now building with steel... **UNITED STATES STEEL**

NEWS and COMMENT ON ART

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering an outstanding group of exhibits and events for this month.

EXHIBITS: Quilts, Counterpanes and Related Printed Fabrics of the 18th and 19th Centuries; Paintings by Frederick Wight; "San Francisco Discovery," a special showing of Bay Area photographers; Photographs of the Monterey Peninsula, by Wayne Bullock; "A Mid-Century Review," an interesting number of German Watercolors, Drawings and Prints—1905 to 1955; A Concert in Paint, Roberto Montenegro; Recent Paintings by Roger Barr; and a special group of Paintings by Fritz Rauh.

EVENTS: Include special lectures on current exhibitions; Classes in Art Enjoyment for adults; Painting Workshop for Amateurs, and classes in picture making for children, each Saturday morning.

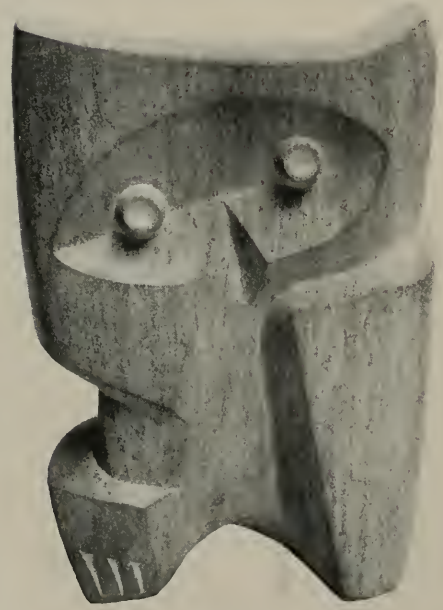
Free automobile parking space is provided. Museum is open daily 10 a.m. to 5 p.m. No admission charge.

CITY OF PARIS

The Rotunda Gallery, 4th floor of the City of Paris, San Francisco, under the direction of Beatrice Judd

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING CIVIC CENTER



OWL

Bedford stone, 14" high, by Richard O'Hanlon, San Francisco.

Lent by the artist to the exhibition, Pacific Coast Art.

PACIFIC COAST ART —
United States' Representation at the IIIrd Biennial of Sao Paulo, 1955

The San Francisco Museum of Art, in the year marking its own 20th Anniversary, accepted the opportunity and responsibility of directing the exhibition representing the United States at the IIIrd Biennial Sao Paulo, Brazil. This was a signal honor, not only to the Museum, but to the growing reputation of the regional art of the Pacific Coast states.

In the selection of the art from all four Pacific Coast centers to be included in the exhibition, the Museum had the cooperation of the Directors and Staffs of the Los Angeles County Museum, the Seattle Art Museum and the Portland Museum of Art; financial assistance was generously forth coming from the International Fund of The Museum of Modern Art, from the Los Angeles County Museum, and from a number of this Museum's friends in the Bay Region.

The exhibition was enthusiastically received at the Biennial and occasioned much favorable comments from artists and critics. At the close of the Biennial, the exhibition was invited to Rio de Janeiro for showing there under the auspices of the Instituto Brasil-Estados Unidos, where it had equal success. The exhibition will be shown in its entirety at the Museum. At the close of the exhibition, a selection of the work will be circulated in the United States under the auspices of the Museums Exhibition Association.

Ryan, is presenting the Fifteenth Annual Pacific Coast Ceramic Exhibition and Sale of Sculpture and Pottery.

The Pacific Coast Ceramic Exhibition was organized in 1942 to encourage and promote good craftsmanship and each year a Jury has been invited, composed of craftsmen from universities and colleges, museum directors and art critics, to pass on material for the exhibition and make the awards.

Field sketches in oil by Maynard Dixon will be featured in an exhibit in the Little Gallery.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is featuring a number of outstanding exhibits and events for June.

EXHIBITS: Paintings from the Collection of Walter P. Chrysler, Jr. An exhibition of 101 important paintings selected from the notable collection of Walter P. Chrysler, Jr. of New York, comprising European examples from the 16th through the 20th centuries, and including outstanding works by Rubens, Van Dyke, Titian, Rembrandt, Poussin, LeNain, Boucher, Corot, Cezanne, Renoir, Van Gogh, Picasso and other noted masters; The Third International Hallmark Art Award Exhibition, representing 50 prize winning paintings; Paintings by Max Band; and Jewelry and Ceremonial Objects, by Victor Ries — two exhibits sponsored by the Bay Area Chapters of Hadassah.

ACHENBACH FOUNDATION FOR GRAPHIC ARTS is featuring, at the Museum: Prints by Stanley William Hayter and Helen Phillips; Interpretations of Nature by Ch'i Pai-Shih, "The Ancient of the Mountain." On Loan Exhibition at the San Francisco Public Library is a group of Drawings and Sketches by James Daugherty—progressive steps in the illustration of a book; and Views of the Holyland, color lithographs by David Roberts and Louis Haghe.

SPECIAL EVENTS: Include Organ Recital each Saturday and Sunday afternoon at 3 o'clock; opening of Summer Painting Classes for Children.

The Museum is open daily 10 a.m. to 5 p.m. Admission is free.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has arranged a program of special exhibition and events for June, including:

EXHIBITIONS: Photographs by Ralph E. Joosten; Expressionism, 1900-1955; and the Pacific Coast Art Exhibit—a showing of the United States representation at the Third Biennial, Sao Paulo, 1955.

SPECIAL EVENTS: Include Concerts and programs of illustrated lectures, lecture tours of the Museum, Art discussions, and Museum Services which include a Library, Rental Gallery and Bookshop. Museum activities include studio Art for the Layman, Adventures in Drawing and Painting, the Children's Sunday morning Art Classes. The Museum is open daily.

BAY AREA PHOTOGRAPHERS EXHIBIT AT MUSEUM

The M. H. DeYoung Memorial Museum, Golden Gate Park, San Francisco, is presenting an exhibition of photographs by Bay Area photographers entitled "San Francisco Discovery." The show is comprised of 180 photographs selected from approximately 1400 entries submitted.

The exhibit is an exciting display of San Franciscans at work and at home. All photographs have been taken since October 1955, and represent about thirty-one professional and amateur photographers of San Francisco, East Bay and Marin county.

WALKER ART CENTER EXHIBIT BEING SHOWN IN SAN FRANCISCO

As one of its series of exhibitions exploring various trends in contemporary art, the San Francisco Museum of Art, War Memorial Building, Civic Center, is currently showing the exhibition "EXPRESSIONISM 1900-1955," which was organized by the Walker Art Center of Minneapolis, Minnesota.

Expressionism, or the forceful expression of strong individual feeling, has always been one of the approaches open to artists and the exhibition surveys the various manifestations of expression in our century, beginning with its revival in Germany and France.

In all there are sixty paintings and fifteen pieces of sculpture in the show by the best known artists of this century working in the expressionist manner, both European and American.

ADDITIONS TO SF MUSEUM COLLECTION

The San Francisco Museum of Art announces welcome additions to its permanent collection: first is a bronze portrait head, "Mademoiselle B" by Charles Despiau. This head was presented in memory of Rosalie M. Stern by the Women's Board of the San Francisco Museum of Art, assisted by a Trustee of the Museum, who was originally a member of the Women's Board and a close friend of Mrs. Stern.

Other gifts presented by the Women's Board are two paintings purchased from the exhibition, "Pacific Coast Art." One entitled "No. 5, 1955" is by Walter Kuhlman of Sausalito; the other, "Sound and Sand", is by Carl Morris, well known artist of Portland, Oregon.

THE EDWIN FRANCIS HOME

Portland, Oregon

OUTDOOR LIVING

A FIXED WAY OF LIFE

By ARTHUR W. PRIAULX

With outdoor living becoming a fixed way of life for western Americans, the big problem confronting most architects today is how to get the maximum living space on a given site at the lowest price. The reason: the wealthy no longer have a corner on beautifully designed and conceived outdoor living areas, for every home owner imagines himself in such surroundings and demands that the architect include them in the base price.

The main problem in most of the west, where building sites come in endless sizes, shapes, locations and varieties, is to capitalize on the natural surroundings and put the environment to work. Integration of home with trees, hillsides, panorama backstop of views, and irregularities of nature present some genuine challenges to the imagination of the architect.

Many a progressive architect today is putting to work such easily obtained natural materials as native

woods and stone so that the texture, colorings, lines, fibre, grain and substance of these highly flexible building materials create a marriage between home and outdoor living areas. Every effort is made to create, through an interplay of solids, voids, light and shadow, a home with a strong emotional appeal.

Here on the west coast the architects have developed a wide variety of variations of the contemporary home design which they had so large a part in impressing on the American scene. Blessed with a plentiful and handy supply of native stone and such incomparable native woods as Douglas fir, redwood, western red cedar and west coast hemlock, they have designed low cost homes of rare charm and beauty and have created outdoor living areas of exquisite taste and utility.

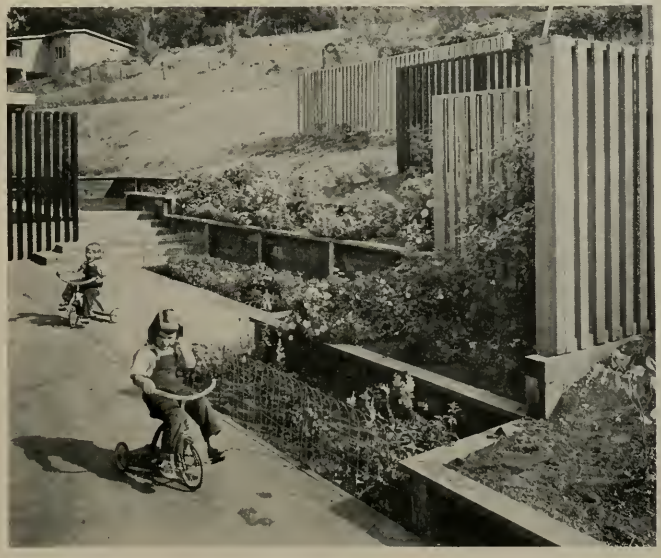
Their task has been made somewhat easier because the native woods lend themselves so readily to incorporation with almost any environment along the coastal states. It has been relatively simple, in many instances, to form the bond between home and site because the texture, grain and colorings of these western softwoods create no jarring note.

The casual living theme can be developed for the appreciation of all the family, yet it need not be elaborate, costly, nor necessarily cover a large area. Some of the areas with the greatest utility and popularity are simple little devices which encourage relaxation. Some of them can be a simple development built around the particular spare-time hobbies or recreation desires of one or more members of the family.

For instance at Bailey Hill near Eugene, the horse-fancying Nils Hult family find their hobby easier to satisfy because a tack room has been built into one wall of their spacious carport (see page 16, top). Architects Clare Hamlin and Martin King designed a compact tack room in the form of a suspended wall cupboard supported by a eight-by-eight inch posts. The entire unit is made of western red cedar to match the rest of the home's exterior. Individual sections provide room for saddles and other riding gear. These can all be locked if needed. Simple, yet part of the outdoor living habits of this active family.

Another equally simple outdoor area was designed for the Warren Weiseth home in rural Lane County, Oregon (see page 17). Tucked up against a hillside, an irregular backyard space, not suited for lawns, was converted into a charming patio sundeck by the simple expediency of constructing a wood deck terrace. Architects Wilmsen and Endicott provided this family with an outdoor lounging, dining and sunbathing area with relatively little cost. A railed banister has built-in benches. The unit was constructed of Douglas fir 2x8s, spaced about an eighth of an inch to allow for easy cleaning with a hose. The area is accessible to both the kitchen and living room through separate doors.

Of course, some of these areas of outdoor enjoyment



HILLSIDE
MADE BEAUTIFUL

At the John Bonzer home in Eugene, Ore., Architect John Stafford has done some careful planning to utilize maximum possibilities of site.

Delightful courtyard garden and retreat has been created at the R. H. Porker home, Portland, by Richard Morlitt by clever use of exterior walls and louvered fence.

are elaborate and costly, such as another feature designed by Architects Hamlin and King at the country home of the Nils Hults (see page 13, bottom view). A covered terrace built on a sweeping curve along one side of a swimming pool, provides a lounging area for swimmers, onlookers and space for outdoor dining. It joins house with an outdoor "cook shack" which is barbecue headquarters in rain and sun. Not only is this covered terrace striking in its sweeping lines as it fits the contour of the hillside, but it has many uses.

Architect Richard Marlitt of Portland utilized exterior walls and beautifully designed screening fences to create a lovely, enchanting courtyard garden at the R. H. Parker home (see page 12, top view). The rough texture of the western red cedar siding and fencing blends in perfectly with the well-landscaped garden shrubs. Privacy for sunbathing, an afternoon tea or just plain family fun, is provided with clever ease in this hillside setting. Surrounding fir trees create an ef-

To give the James Luckey family lounging and play room, Architect Louis F. Bronson III decked the entire backyard with Douglas fir and enclosed the area with a distinctive fence.

fective background for this retreat. Louvered fence boards permit free movement of air on the occasional warm day in Portland. This illustrates the possibilities for obtaining adequate and at times enchanting outdoor space with very little investment. So much of the complete realization of the possibilities of any site is tied into advance planning, that it pays to make a complete site study before any details of the main structure have been worked out.

Outdoor living does not necessarily mean right out under the sun and stars. Some of the most useful and practical of these facilities can be areas around the home readily accessible from main living rooms and under cover of overhanging roof areas. Roofed lanai, terrace, patio and porch sometimes offer a family all the outdoor freedom it desires. One of the beautiful terrace porches such as designed in the Henry Hall home of Eugene by Architect John Stafford (see page 14) has great utility for a longer period of the year in rainy Oregon than some of the more exposed outdoor living spaces. Here the family dines through much of the long summer season. It is a popular spot for bridge teas and just plain lounging. The painted cedar siding

SWIMMING POOL in house—Architects Wilmsen and Endicott designed the pool, then built the house around it.

The Nils Hult home, Eugene, Oregon . . . Architects Hamlin and King designed for outdoor living. Covered lanai connects home with barbecue shed, thus offering shade to dining area and bathers.

in gray and white makes a perfect background for almost any type of furniture. A dutch door is handy to the kitchen, and the terrace may be reached as well by French doors from the living room. One thing on which most architects agree is that these outdoor living areas should be readily accessible to the home, preferably they should have access to kitchen and living room, and in some instances where the home is rambling and the grounds are extensive, access from the master bedroom and other bedrooms is an attractive feature.

Another Richard Sundelcaf home in Portland which utilizes some interesting features in the home design to create an outdoor living space is the Edwin Francis home (see page 10). A cement-floored patio covered by a wide overhanging roof section provides one of the most useful and busy recreation areas of the home. Adjoining wide lawns, the patio appears to be a part of the home and at the same time a part of the outdoors. Sundeleaf has created this illusion by the use of a full glass wall in the living room where the patio faces. Access is from the dining room to the patio. The heavy overhanging roof has been designed in Douglas fir with the decking exposed to create an attractive installation.

Not all recreation areas need to be outdoors, as Architects Wilmsen and Endicott have proven in the John Tiffany home at Eugene (see page 13, top view). Here a home has been built around a swimming pool, and the entire roofed-over area around the pool for all practical purposes is equivalent to an outdoor living area. The only difference is that this particular play area is a 12-months usable space, which is important in a cool temperate climate such as Oregonians enjoy. The cost of constructing this medium-priced home about a swimming pool was not excessive. It was no more than constructing the pool and home separate, with the single exception of the cost of the lightly framed roof section of Douglas fir. Actually, some of the cement work serves double duty as foundation for the home and walkway for the pool, so the cost was probably less in the combination. By maintaining the pool at comfortable temperature, it is possible for the Tiffanys to maintain an exotic garden of tropical plants and flowers.

An interesting adaptation of a relatively simple flat site to a family's outdoor needs is illustrated in the James Luckey home in Eugene designed by Louis F. Bronson III (see page 12, bottom view). To provide the Luckey baby with a play area in the hot summer months, a simple pool was built of Douglas fir planking, which holds enough water for baby to splash around in. Pool doubles as a sandbox for cooler seasons. Most of the space usually kept in lawns has been

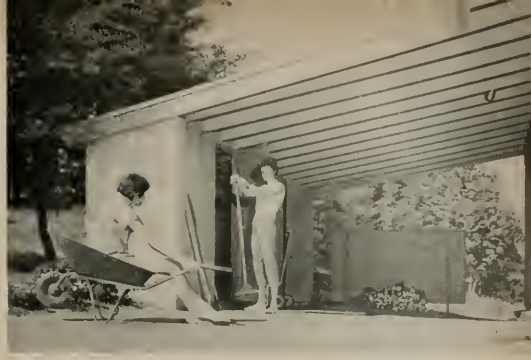
DELIGHTFUL PATIO

The Henry Hall home, Eugene, designed by Architect John Stafford, has simple patio available to kitchen as well as to the living room.

covered with 2x8 fir planking, the result is an extra large decked patio, the central figure of which is a very large deciduous shade tree. The Luckeys were looking ahead to the next short year in which Junior would be wanting space for tricycle riding and later bicycle riding. They have developed at very little expense an effective and highly useful patio especially suitable for their growing family, but still definitely as usable for the rest of the family.

Proving that exclusive patios can be built for practically no expense when some imagination is used, the Leslie Coons of Lake Oswego district in Portland (see page 15, bottom) found themselves with a practically worthless yard space facing a street between house and garage. Using the same western red cedar siding of the home and garage, an estate type fence was built along the street side, joining house and garage. Then the owner bought a quantity of old brick and where the unused lawn had been he laid a patio deck of brick. Result is a workable and simple patio where the family enjoys barbecue dinners prepared on a portable barbecue cart. A few lounging chairs and presto, the family has a patio for outdoor living in the western theme.

Many an architect has found he can add considerable extra outdoor living space to a home almost without cost by adjusting the basic floor plan so that the exterior walls of the home can be converted into walls for the outdoor living room. For instance, homes with a floor plan in an L or U shape have two or more walls of the outdoor living room already in place. A little attention to access from the main rooms of the home is all that is required in original plans. The patio area can be developed then at any time the family desires. Architects have also found that it is much easier to adapt the exterior home walls to the outdoor living room if they utilize fully the texture and natural characteristics of western woods which have such a marked



The William Vernon home, Portland, by Architect DeWitt Robinson, features more outdoor living.

COZY BARBECUE CENTER

and lounging area of the Leslie Coons home in Portland's Lake Oswego area.

TACK ROOM combined with carport wall at Bailey Hill country residence of Nils Hult. Architects Hamling and King.

CARPORT at Irving Henning home provides storage area and roofed outdoor play area. John Stafford, Architect.

affinity for most of the native trees, shrubs, rocks and especially the natural colors of the outdoors.

Hillsides are always difficult to utilize, especially if the home occupies the lower ground. But Architect John Stafford has done an interesting bit of planning at the John Bonzer home in Eugene to capture the full beauty and utility of a hillside site (see page 11). Reaching up the hill from a paved walkway which occupies an area along the entire rear of the home, are a series of cedar fences, set at irregular intervals in stairstep fashion up the hill. A section was started at the lower right hand corner adjacent to the paved walkway. The next section was set out toward the left but several feet up the hill. Thus with each of four sections. The result is an interesting and attractive hillside which has been turned into a garden paradise. In front of each fence section different types of shrubs and flowers have been planted.

While not strictly designed for outdoor living, an adjunct to better enjoyment of western living is the multi-purpose carport adjoining the Irving Henning home in Eugene designed by Architect John Stafford (see page 16, bottom). Adequate for the family's two cars, the hillside side precludes an outdoor patio so the cement floored carport becomes a patio by the simple

expedient of removing the cars. Casual furniture is stored in adequately sized compartments which are closed off with attractive doors set in the western red cedar sided walls. The easily converted patio is accessible from either the front door which opens from a small hallway off the carport or from the kitchen by a door reached from a hallway at the rear of the carport.

Some architects, like DeWitt Robinson of Portland, help make outdoor living more attractive by providing for easy access to furniture and garden equipment (see page 15, top). In the William Vernon home, Robinson built a compact storage wall to form one side of a carport which provides ample storage for all garden tools, wheelbarrows, lawn mowers, as well as storage during wintertime for garden furniture. This encourages use of the outdoors by taking some of the drudgery and inconvenience away.

There are a number of basic considerations for the architect to keep in mind when he is planning the home and patio area together. Bring the house down or the patio up so they are on the same level wherever possible, also making sure the drainage is away from the house. For more convenience pave the patio floor area with wood decking, stone, tile or brick, for this makes the patio a genuine extension of the indoors and adds to its size and utility.

Screen off undesirable areas in the yard and garden with inexpensive screening fences or shrubs, and in each instance the fence should be designed specifically for the job. Provide some sun shelter with overhanging roofs, free roofs, trellis work, vines, or even a large tree.

Use decorative built-ins especially where they have good utility and make for more comfort in the outdoor area. Night lighting, running water, electric outlets for grills, lights, coffee percolators, planters all are added features which can be used to advantage.

The main thing to keep in mind, most architects will tell you, is to design a patio that can be used. That means it must be well located and easily reached, and it must have enough creature comfort so that it is something more than a mere piece of the outdoors. It should have reasonable privacy. It should have some protection from the elements. It should be designed for maximum day and night use and all-weather use, if possible. It can be the most beautiful feature of your home which calls attention to all the rest of your residence. It can add immeasurably to the value of the home in case it must ever be sold.

SUN DECK and lounging area in the Warren Weiseth home, Lane County, Oregon, designed by Architects Wilmsen and Endicott, is inexpensively built of Douglas fir decking.

POMONA FIRST FEDERAL SAVINGS and LOAN ASSOCIATION

POMONA, CALIFORNIA

B. H. ANDERSON, A.I.A.
Architect

Structure:

The building is a steel frame building with steel cellular deck floors with 3" of concrete as wearing floor. The steel deck floors can be used for electrical wire race way for future electrical or telephone outlets wherever desired.

Area:

Areas of the various floors of the building are as follows:

Basement	6,613 Sq. Ft.
Ground Floor	9,712 Sq. Ft.
Second Floor	8,386 Sq. Ft.
Pent House	888 Sq. Ft.
TOTAL AREA	25,599 Sq. Ft.
Rentable Area	6,440 Sq. Ft.)

Exterior:

The two street sides of the building are finished with ceramic veneer (terra cotta) grey and red in color, and the upper part of the building is constructed of porcelain enameled panels with aluminum trim. The porcelain enamel panels are constructed of two plates of steel with a one inch space between, filled with an air cell insulating material. The panel on the exterior side is coated with porcelain enamel baked on at high temperature.

The south and west sides of the building are cement plaster on reinforced brick walls. The sun shades on the second floor south windows are of anodized aluminum.

Interiors:

Basement—

The basement contains the combination dining room and assembly room, a fully equipped kitchen, all locker and toilet facilities for employees —including a lounge for women employees. The remainder of the basement is devoted to rooms for mechanical equipment including the telephone equipment room, the heating and air conditioning equipment, and storage space.

The heating and air conditioning system is gas fired; a steam boiler is used for heating, and 75 tons of Servel refrigeration for cooling.

The system operates by passing air by means of fans over a coil in which either hot or cold water is circulated for heating or cooling, depending upon the outside temperature. The system is completely automatic in operation.

Ground Floor—

The entire floor is given over to the business offices of the Association with the main entrance on Garey Avenue, and a second entrance from Center Street through the elevator lobby.

The executive area, the private offices, and conference rooms have carpeted floors. This carpet was woven especially for the building. The main lobby and elevator lobby have floors of pure vinyl tile; the remainder of the floors are of asbestos vinyl tile.

All of the wainscots and round columns are covered with vinyl plastic fabrics.

The fixture work is of mahogany, and the color panels and screens are covered with vinyl plastic fabrics. All ceilings on the ground floor are of acoustic tile.

All lighting on this floor is done with 4′ x 4′ fluorescent fixtures. Each fixture has 8 tubes with plexiglass diffusers. The light level is maintained at 85 foot candles at desk height.

Second Floor—

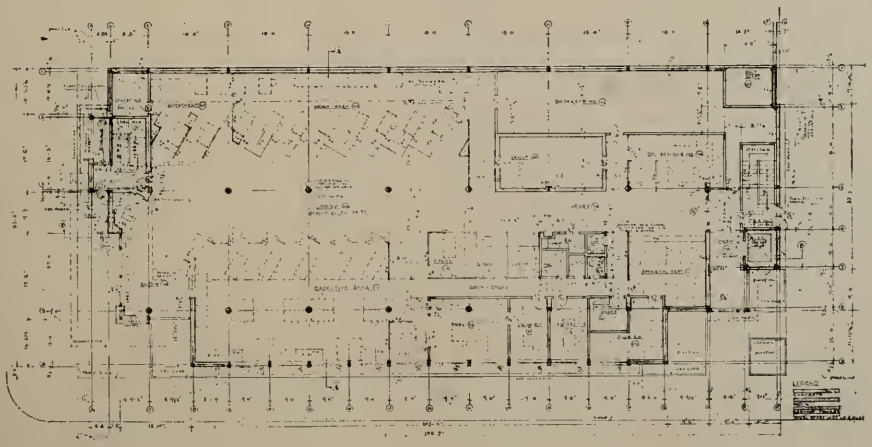
This floor is rentable area with the exception of toilet facilities and the Board of Directors' room.

The Board Room is finished with the same carpeting as the ground floor, and has vinyl plastic fabric walls and acoustic tile ceiling.

Pent House—

This area is used entirely for housing the elevator machinery, water cooling equipment, and fans for the air conditioning system.

GROUND FLOOR PLAN



LIGHTING
IS GETTING BETTER!

By BILL JONES

RESEARCH ENGINEER
SMOOT-HOLMAN COMPANY

The last few years have seen a tremendous improvement in the methods and materials used for all types of lighting. Today's lighting installations show marked superiority over those of even five years ago, not only through higher levels which are being used, but more important, through increased ease of seeing by making use of recent findings in the research part of the field.

These improvements in lighting methods come generally from three sources. First, improved methods of calculating lighting levels have been devised. Second, new light sources have been added to the existing list, and the existing sources have been improved. Third, a greater understanding has been reached concerning the way light affects human beings, resulting in better control of the problems of lighting design.

The lumen method of lighting design has been serving well since its inception forty years ago by Harrison and Anderson.[1] This involves taking the light from the lamps and multiplying it by a factor, called the coefficient of utilization, to determine the number of lumens actually arriving on the working plane. Harrison and Anderson tried a range of shape and size of room, and came up with a classiffication of rooms called "Room Index," and lettered A through J. A table was then plotted for each lighting fixture of interest, giving the coefficients of utilization for each room index and combination of room surface reflectances desired.

With the advent of large rooms and indirect lighting, serious differences between calculated levels and those actually measured became apparent. Particularly, the development of the cosine-corrected light-meter, which gives a much truer indication of the level present than had the previous non-corrected meter, resulted in calculations being lower than measurements by as much as 50%.

This in itself was not too serious, since the calculations always gave conservative results, but that very conservatism would sometimes lead to the engineer's being accused of loading the job, and in some cases, particularly with totally indirect systems, resulted in an overly bright ceiling with consequent glare.[2]

Drs. Moon and Spencer, working with the physical theory of lighting, came up with a method of determining the distribution of light flux within a room which allowed a precise (theoretical) determination of room illuminations and brightnesses.[3,4] The results of their labors were thoroughly checked by a number of experimenters, and proved highly accurate. It thus became possible to predetermine the illumination and brightnesses to be expected with accuracy suitable for engineering use. The basic equations being somewhat laborious to use, several adaptations and simplifications of the work have been made.[5,6,7] Some of these use the letter indices, and other take advantage of the increased accuracy of the new system by using a numerical systm of room indices, which had been experimentally determined by Hisano and later confirmed by Moon and Spencer's Interreflection theory.

Many manufacturers are now determining their coefficient tables by this (interflectance) method, and engineers using these tables are reaping the benefits in increased accuracy. The method will eventually become standard, though just now whose adaptation will be used is open to question.

Constant research and design by the makers of light sources has resulted in a number of new sources and almost universal improvement of existing sources in the last few years. Ten years ago, the highest output fluorescent source available was the 200 milliampere T-8 slimline lamp, producing about 3000 lumens. This

lamp has virtually disappeared, with the industry standard now being the 430 milliampere T-12 lamp, which delivers more than 5000 lumens. This lamp is even now being displaced in many instances by a new 800 milliampere rapid-start lamp delivering over 7000 lumens. As the ouputs have increased, so have the efficiencies, rising from 60 lumens per watt for the 200 mil to 70 for the 800 mil. Lamp life has risen threefold, to a rating of 7500 hours. Similar tales can be told of the increase in efficiency and numbers of types of mercury vapor lamp, and of the improvement in color of its ouput. Even the incandescent lamp has had recent design changes, resulting in smaller bulbs and several per cent gain in output.

All these new and improved sources have given the lighting designer more tools to work with, so that he has been able to come up with better designs at lower costs. Schemes which have heretofore been impractical because of high cost or high wattage have moved into the realm of practicality.

FIG. 1 — LIGHTING FIXTURES in this open-area installation cast an upward light which reduces contrast between ceiling and fixtures and neutralizes any distinct lighting contrast.

The major improvement in lighting methods comes from increased awareness of the manner in which human beings are affected physiologically and psychologically by light. Researches in this area in the last decade, not only by lighting researchers, but also by physiologists, researchers in optics, psychologists and others have provided us with data from which better lighting designs could be accomplished and have advanced theories which give a basis to many of our previous "rule of thumb" conclusions.

Possibly the single most important concept to arise was that of treating the entire visual environment, thereby providing proper "seeing conditions" rather than "X footcandles." The impetus for this goes back several years to the researches of Harrison and Meaker,[8] who developed a "glare factor" which rated installations in terms of the cumulative effect of the various brightnesses in the visual field. In more recent years, Guth[9] developed a method of specifying room conditions in terms of the percentage of people who normally would consider a given installation comfortable. This is called the Visual Comfort Index of the room, and tables of these percentages can be prepared much as are tables of coefficients of utilization. At least one such set of tables for typical fixture types is now in wide use.[10]

By using the above results along with other criteria which have proved themselves in practice (such as the three-to-one contrast ratio), it is now possible for the lighting designer to predict with considerable confidence just what results, both quantitative and qualitative, may be expected from a proposed lighting installation.

Equally important has been the effect of the recent findings on the design of lighting fixtures. Industrial fixtures have been designed with varying percentages of upward light, relieving the contrast between fixture and ceiling and thus contributing to the comfort of the installation. Shielding angles have been improved both crosswise and lengthwise. The result has been installations like that pictured in Figure 1, where the ceiling-to-fixture contrast is many times less than that of the totally direct fixture, with a very large gain in comfort of seeing. Other benefits have accrued from apertures in industrial units, chief among which are improved ballast and lamp performance due to better cooling, and improved maintenance due to the self-cleaning action of the air stream.[11]

The commercial interior has also benefited greatly. Room surface reflectances are rising; it is not unusual to find rooms with ceilings of 80%, walls of 65%, and floors of 30%. Not only do these utilize the light from the fixture more effectively, they also reduce contrast and improve seeing conditions. Figure 2 shows a room in which care has been taken to keep contrasts low, and presents an extremely comfortable seeing environ-

FIG. 2

Note how even the brightnesses in the room are, and how comfortable its appearance is. The very low contrasts in this case are helped by some outside light through clerestory windows, but the same effect can be achieved with upward light alone.

ment with a relatively conventional fixture.

Figure 3 depicts a room in which the lighting system was designed with a conscious effort to take into account everything which was known at that time which should contribute to excellent lighting. By control of the room reflectances and by careful balance of the upward and downward components of light from the fixture, the brightness distribution in the room was so arranged that comfort conditions were nearly perfect, which has proved to be the case in use in the actual installation. Reflected glare was eliminated. An intensity fully sufficient for the critical tasks of the room was achieved without the slightest suggestion of glare. This particular installation stands as an example of what can now be done, knowing what we now know about lighting methods.

The future, from a lighting standpoint, is also bright. Still newer and more efficent light sources are on the horizon. Electroluminescent panels bid fair to be useful in many applications. Research is continuing with a view toward establishing the amounts and qualities of light needed for various tasks, and the reasons for them.[12] Calculation methods for the quantity and quality factors are being streamlined and made easier for the architect and engineer to utilize. The next few years should see at least as much advancement in lighting as the last decade has seen, and most probably more.

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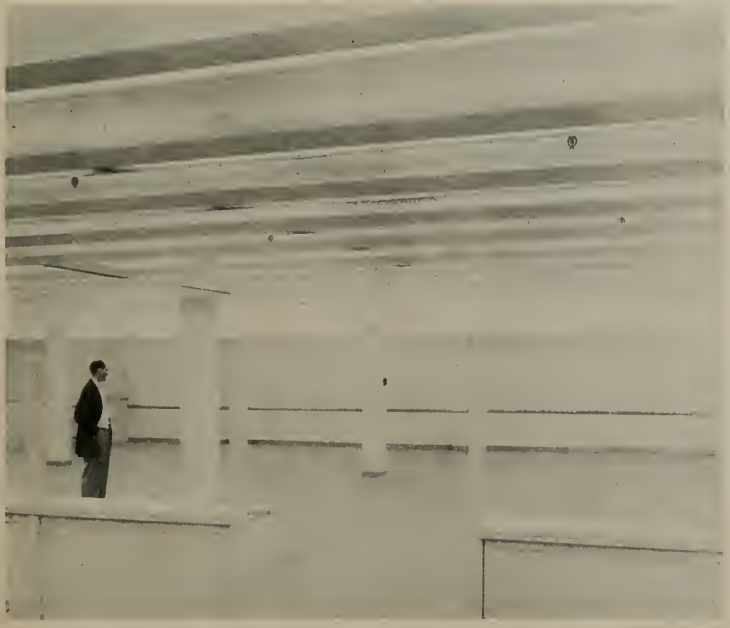
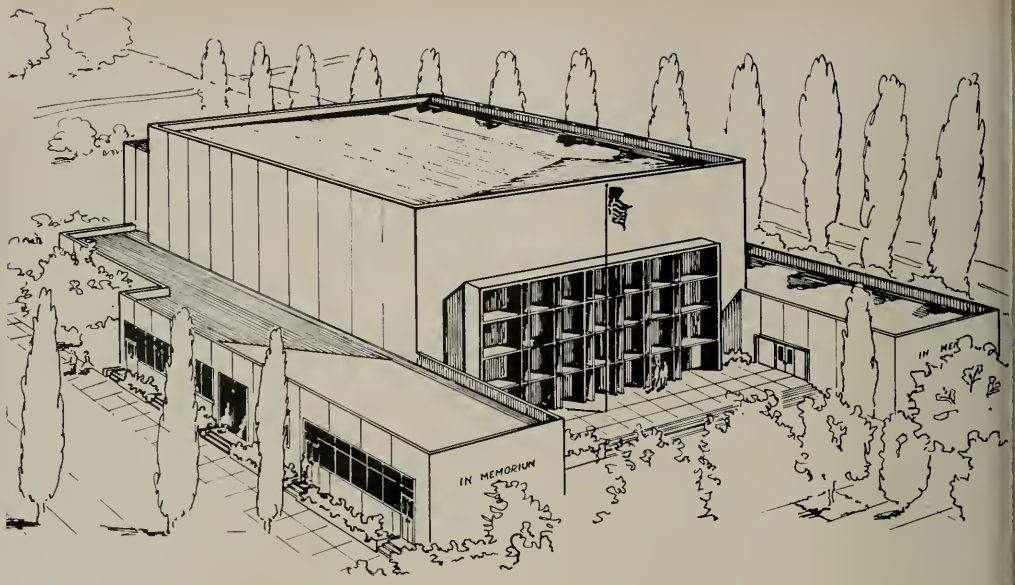


FIG. 3

Note the exceedingly low contrasts, and how the ceiling is cut off by the fixtures themselves at high angles. This is a case where fixtures, reflectances and distributions were all carefully matched for best seeing conditions.



TULARE MEMORIAL AUDITORIUM

TULARE, CALIFORNIA

37,000 SQ. FT. AREA COST, $16.20 PER SQ. FT.

KENNEY and CULLIMORE
Architects

JOHN HENRY MAAG, Architect

C. CULLIMORE, JR., A.I.A.
Architect
Bakersfield, California

A. C. KING
General Contractor
Fresno, California

The $650,000 Memorial Auditorium recently completed in the City of Tulare, California has been appropriately dedicated to War Veterans, and with considerable fanfare and community pride. It is not only an imposing structure of cultural and civic import; but in the matter of cubic footage it is probably the largest public assembly building of steel-frame construction in the San Joaquin Valley.

The building is completely refrigerated for summer use, with year around air-conditioning. Ten acres adjacent to the structure are to be used for tennis, swimming and other recreational facilities.

The building has been designed not only to withstand to-be-expected seismic disturbances of Zone 3 (.20 DL) of the Uniform Building Code, but to take advantage of the saving in construction costs by employing the method of lift and tilt-up concrete slab construction. Although a considerable number of commercial structures and warehouses in the area

have employed tilt and lifting techniques, few buildings of public assemblage have used it. The slab strengths were, of course, verified by laboratory and field tests as the work progressed, and great care was exercised in the superintendence of the work.

Some of this structure's six inch thick concrete slabs are as much as twenty by thirty feet and were poured in a horizontal position. They were welded to the steel frame by means of heavy steel connectors imbedded in the slabs.

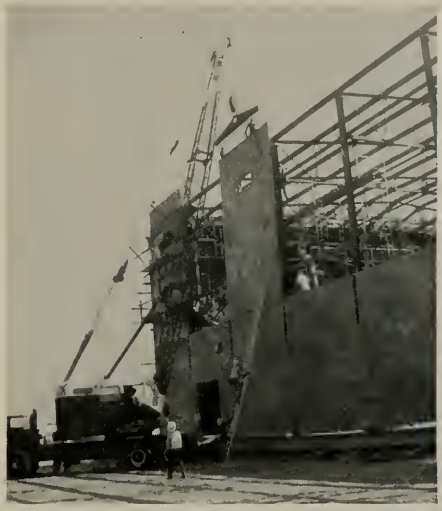
The main facade, which was designed for possible tilt-up, was formed in the conventional manner and poured in position, the construction procedure of this element having been left, by the specifications, to the option of the contractor. All other sides of the main structure and of its wings were tilted or hoisted in place by the tilt-up or lift procedure, thereby effecting a substantial saving in construction cost. The erection revolved around the tilting, lifting and welding of the panels in place.

The form work for these panels practically eliminated the necessity of form lumber, except the necessary edge forms which could be reused. Less finishing was required for the slabs, which were cast on a troweled surface, after a parting compound had been sprayed on. The saving on the panel work in the lift and tilt cost on the job is estimated to be about 95 cents per square foot of panel area less than conventional concrete poured in forms in place.

An interesting item of this system of fabrication of steel with concrete is the method of securing the panels to the steel frame, the connectors having been effectively embedded in the panels, were, after being lifted or tilted to their position, welded to the steel frame.

The two-story central element contains an auditorium that will seat 1600 persons on the main floor and an additional 400 persons in the balcony. Com-

(See page 32)



TILT-UP CONCRETE SLAB is being hoisted into second floor position for affixing to steel.

WORKMEN ARE LIFTING SLAB to position on the ground level preparatory to affixing to the steel frame.

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PASADENA CHAPTER

The June meeting was devoted to an informative report on the 88th Annual A.I.A. Convention, and a discussion of Shopping Centers. President William H. Taylor reported on the convention, while Frank E. Cox, Technical Consultant for Shopping Centers, Berkeley, was the principal speaker on Shopping Centers.

A highlight of the A.I.A. Convention was the conveying of a Fellowship on Culver Heaton, past president of the Chapter.

NORTHERN CALIFORNIA CHAPTER

Fellowships in the American Institute of Architects were bestowed upon Norman K. Blanchard and Ernest J. Kump, Chapter members, at the recent national A.I.A. convention in Los Angeles.

Recent new members include: Walter Althausen, Eugene F. Angell, H. C. Baumann, Roger F. Hooper, Henry E. Martens, Dixon D. Power, Raphael S. Soriano, and Patricia Jane Vaughn. Associate Members include James W. Crisp, and Junior Associates, Robert M. Cranmer, Antonios Petropoulos and Elizabeth G. Reutter.

SOUTHWEST WASHINGTON CHAPTER

Prof. Herrman, Dean of the Department of Architecture, University of Washington, was a recent speaker at a chapter meeting, as was Gerald Davis, who presented a film describing the Aspen Design Confer-

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ence which is the Sixth Annual International Design Conference and will be held in June.

Gaynor Anderson was made a Corporate Member recently.

Attending the Regional Conference on June 2 were Waldo Christensen, past Regional Director, and Donald Stewart, present Regional Director. Gordon N. Johnston is General Chairman of the Conference.

CALIFORNIA COUNCIL OF ARCHITECTS

Plans are progressing for the educational, technical, and recreational programs to be presented at the Annual Meeting of The California Council of Architects, scheduled to be held October 10-14 at Yosemite Park, with convention headquarters at the new Yosemite Lodge.

As a large number of delegates and friends are expected and accommodations are more or less limited, it has been suggested that early consideration be given to the matter of reservation requirements.

COAST VALLEYS CHAPTER

Among recent activities was the annual meeting and Stanford Student Award Program held in the Stanford Art Gallery. Following the awards program an inspection was made of a display of student work for 1955.

A special exhibit of members' work is being prepared for display at the annual California Council of Architects convention scheduled to be held in Yosemite Park in October.

WASHINGTON STATE CHAPTER

Citations in the Sixth Annual Honor Awards Competition were presented owners, contractors and architects at the June meeting. Members of the three-man jury were: Allan Lipple of Tacoma, Omer Mithun, Tacoma, and Charles E. Pratt of Vancouver, B.C., winner of the Canada Massey Award for the nation's outstanding design executed between 1953 and 1955.

The annual meeting of the chapter is scheduled for June 28 in the Benjamin Franklin Hotel.

ARCHITECT ROGER LEE WINS FIRST AWARD

Architect Roger Lee of Berkeley won the First Honor Award in the Custom Built House, Class A competition recently judged at Menlo Park, California.

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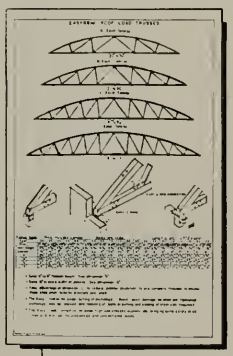
Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"Texas Towers", a motion picture, was shown at the June meeting through courtesy of the Raymond Concrete Pile Company, while business matters centered around various committee reports and a general discussion of the state-wide campaign in connection with Senate Constitutional Amendment No. 6 which will permit use of private engineers by state agencies where necessary to proceed with construction and technical services are not available within the state department.

The Annual Picnic is scheduled for June 30 at the Turtle Rock Ranch located on the north slope of Mt. Diablo in Contra Costa county. In addition to a steak barbeque, games of chance such as horseshoes, golf, swimming and volleyball have been arranged, highlighted by a intersectional game of softball between SEAONC members and engineers of Sacramento.

NEW MEMBERS. Recent new members include Robert T. Lawson, Chief Engineer, Dames & Moore; John B. Rutherford, Civil Engineer, Russell Fuller; and Affiliate Members Vance C. Mape, vice-president, Johnson & Mape Construction Co.; and William O. Miller, vice-president and manager, Lift Slab Corpn of Northern California.



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SEAOSC AUXILIARY SCHEDULES ANNUAL SUMMER DINNER DANCE

Highlight of the pending summer social season of the ladies Auxiliary of the Structural Engineers Association of Southern California, is a Dinner Dance, which will be held at the Altadena Town & Country Club on Saturday, July 21st. The event is open to all SEAOSC members and their wives.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

Present activities emphasize the need for public education of the provisions of Senate Constitutional Amendment No. 6, which will be presented to the voters of the state at the November general election.

William T. Wright, SEAC president, has declared "The engineers and architects of California can not leave passage of this vital legislative measure to chance, nor can we afford to run the risk of having the public misled by those who oppose it for purely selfish reasons."

Cooperating in the campaign of public education on the details of the Amendment are representatives of the California Council of Architects, Structural

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

Col. Wm. F. Cassidy, President; Cmdr. W. J. Valentine, 1st Vice-President; Col. Edwin M. Eads, 2nd Vice-President; Bob Cock, Secretary; C. D. Koerner, Treasurer. Directors Col. J. A. Graf, Capt. A. P. Gardiner, P. W. Kohlhaas, C. G. Austin and C. R. Graff.

Engineers Association of California, California Council of Civil Engineers and Land Surveyors, and the Consulting Engineers Association of California.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Research Problems Relating to Timber Construction" was the subject of general discussion at the June meeting held in the Rodger Young Auditorium, Los Angeles.

Harry W. Bolin, T. C. Combs, and Ben Benioff discussed a number of phases of the subject including: fire protection, fire insurance, connectors and connecting devices, and recent developments in the various Forest Products Laboratories.

Of the 173 successful candidates passing the recent civil examination and being granted licenses by the state, 12 are members of the SEAOSC.

Among new members are: Luis A. Arevalo and Malcolm D. Horton, Junior; Kenneth Brunner and Joseph J. Takahashi, Associates; and Max W. Strauss, Member.

AMERICAN SOCIETY FOR TESTING MATERIALS—NATIONAL MEETING

The Second Area National meeting of the American Society for Testing Materials will be held in the Hotel Statler, Los Angeles, September 16-22nd. Meetings will include social programs, plant visits, technical discussions led by nationally known guest speakers, and special sessions on construction material testing (concrete), soils, structural sandwich construction, seismic loading design, and wood construction.

FEMINEERS

The June meeting was a Garden Party at the home of Mrs. William Reinhard in Atherton. Members brought picnic lunches and coffee and punch were served.

The entertainment program was in charge of Mrs. Arnold Olitt and Mrs. Victor Sander of Berkeley, and Mrs. Reinhard.

NEW GIRLS' DORMITORY

Architect Norman B. Entwistle, 56 N. Hill Ave., Pasadena, is completing plans for construction of a girls' dormitory at Westmont College, Montecito, Santa Barbara County, for the Board of Trustees of Westmont College.

The new building will provide complete facilities for 170 girl students.

COUNTY JAIL AND SHERIFF OFFICE

The architectural firm of Wright, Metcalf & Parsons, 2323 E Street, Bakersfield, is preparing plans and specifications for construction of a new 4-story and basement combination County Jail and Sheriff's Office in the Civic Center at Bakersfield for the Board of Supervisors of Kern County.

The new, modern building will be of reinforced concrete construction, include all modern facilities, and will cost an estimated $2,750,000.

NOW GRADE STAMPED WEST COAST LUMBER

A substantially increased volume of West Coast lumber is now being grade-stamped, according to H. V. Simpson, manager of the West Coast Lumber Inspection Bureau.

Only inspectors and supervisors employed by the Bureau, or graders under direct supervision of the Bureau, may apply Bureau grade stamps, and Simpson suggests that buyers make sure of the validity of grade stamps on lumber as a protection against inferior lumber.

Official stamps of the West Coast Lumber Inspection Bureau are identified by a shield used in conjunction with the letters "WCLB".

PRODUCERS COUNCIL SEEKS HOUSING DATA

The most comprehensive study ever undertaken of the physical characteristics of new housing is being conducted by the Bureau of Labor Statistics of the US Department of Labor, under the sponsorship of the Producers' Council, Inc., according to William Gillett, president.

The study will cover from 40,000 to 45,000 homes, started during the first quarter of 1956, and will be obtained from personal interviews with home builders. When compiled it will benefit the home construction in many ways and will show the latest trends in housing, style and type of homes that builders are constructing; the number of square feet of floor space, number of bedrooms and bathrooms, utility rooms, basements, how the houses are being heated, and what types of kitchen equipment and other facilities are being provided.

SCHOOL BONDS ARE APPROVED

Voters of the Pittsburg Unified School District, Pittsburg, California, recently approved the issuance and sale of $5,000,000 in school bonds.

Funds are to be used in the construction of a new Junior High School in Pittsburg and for the construction of additions to the present high school and various elementary schools.

ARCADIA METALS PRODUCTS ENLARGES BRANCH OFFICE

Sales and service operations of the Northern California branch office of Arcadia Metal Products have been expanded to accommodate increased demands from builders and contractors in California and Nevada. The enlarged offices are maintained in San Francisco.

HERTZKA & KNOWLES ADD TO STAFF

Hertzka & Knowles, Architects, of San Francisco, recently announced the addition of Victor A. Cusack to the firm's staff.

Cusack, a graduate of Yale University, has just returned from a two year trip to Europe, where his work included military and resort-hotel design, and prior to that practiced architecture for eight years, at one time being associated with Frank Lloyd Wright.

ZONING ORDINANCE COVERS BIG AREA

The Santa Barbara County Planning Commission has approved a new zoning ordinance for the large area of Goleta Valley, north of 101 Highway and east of Carneros Creek.

Under the terms of the ordinance, no building sites less than a quarter of an acre will be permitted in the district.

ARCHITECT SELECTED

The architectural firm of Reynolds & Chamberlain, 3833 Piedmont Ave., Oakland, has been commissioned by the board of the Petaluma City School District, Petaluma, to draft plans for construction of senior high school buildings to be built in the City of Petaluma.

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WESTERN STRUCTURAL TILE INSTITUTE MAKES REPORT

The second phase of the work of the newly formed Western Structural Tile Institute in standardizing the products of its members has been completed with publication of a Specifications of Glazed Structural Wall Units, and release of the new booklet to architects in the seven Western states, Hawaii and Alaska, according to J. B. Crawford, vice-president of the Kraftile Company of Niles, California.

A previous announcement was the development of a chart of standard shapes of modular units measuring a nominal 6" x 12" face in 2", 4" and 6" thicknesses.

The Washington Brick and Lime Company of Spokane, Neal R. Fosseen, president, is another member of the Institute.

SUPERVISORS APPROVE PERMIT FOR HOSPITAL

The Board of Supervisors of Orange county recently approved a permit for the construction of a 37-bed hospital to be built by the Garden Grove Hospital, Inc., on the east side of Berrydale avenue, north of Westminster, in Garden Grove.

The site of the new hospital is on a five acre tract which will be developed for the hospital and facilities.

SCHOOL BONDS APPROVED

Voters of the Brentwood Union Elementary School District, Brentwood, recently approved the issuance and sale of $200,000 school bonds with funds to be used in the construction of additions to the present elementary schools. In addition a State Aid grant of $200,000 has been obtained.

GEORGE O. PRUSSELL AT SAFETY MEETING

George O. Prussell, executive vice president of the Los Angeles Home Builders Institute, was invited by President Eisenhower to attend the President's Conference on Occupational Safety which was recently held in Washington, D. C.

Purpose of the conference was to further accident prevention measures and safety education in the industrial plants and on the farms of America. Speakers and clinics demonstrated successful methods of preventing injuries. More than 3000 management leaders were in attendance.

While in Washington, Prussell also attended the annual spring meeting of the board of directors of the National Association of Home Builders.

IRVING MYERS OPENS OFFICE

Irving Myers, author of "Mexico's Modern Architecture" and consultant in visual design and research to the Southern California Chapter, A.I.A., in preparation of its "Guide to the Architecture of Southern California," has opened offices in the Architect's Building, Los Angeles.

Myers will engage in consultation, lecturing, and writing in the field of architecture and art.

KENDALL ELLINGWOOD APPOINTED BY GRUEN

Kendall Ellingwood, mechanical and electrical engineer, has been appointed Director of Development of Victor Gruen & Associates, Architects, and will maintain offices in Southern California, although he will direct and coordinate the firm's architectural activities throughout the country.

Ellingwood is a native of Pasadena, graduate of Stanford University, and has been prominent in engineering and civic affairs in Los Angeles for many years.

PROFESSIONAL OFFICE BLDG.

Architect Raymond Dean Conwell & Associates, 5430 E. Beverly Blvd., Los Angeles, is completing drawings for construction of a 1-story, frame and stucco building to be built in the Eastmont District of Los Angeles.

Containing 5800 sq. ft. of area, the building will have composition roofing, tapered steel beams, fixed aluminum windows, concrete slab and asphalt tile floors with terrazzo floor entrance, air conditioning, plumbing and electrical work.

CHURCH BUILDING

Architect Norman B. Entwistle, 56 N. Hill Avenue, Pasadena, is completing plans for construction of a reinforced brick church building to be built in Sierra Madre, for the Bethany Church of Sierra Madre.

The Sanctuary will have a seating capacity of 700 persons; asbestos shingle roof, concrete slab floor with asphalt tile, glued laminated wood trusses, steel awning type sash, forced-air heating, acoustical plaster, plywood paneling, electrical and plumbing work.

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(From page 25)

plete, professional basketball facilities are included in the scheme. The east wing will house veterans' organizations and the basement contains a bowling alley. The west wing consists of banquet facilities, where provisions are made for veteran auxiliaries. The building, complete with stage-rigging, built-in seats, chairs, projection room, spring-type basketball floor, kitchen and equipment, locker rooms with equipment, all covering approximately 3700 square feet was built at a cost of $16.20 a square foot.

The results attained in this structure substantiate the practical employment of tilt-up methods for public works; where heretofore the use of tilt-up concrete has been largely restricted to storage areas and the factory type of buildings. All of the steel in this building is fireproofed and the structure is Type I. The architectural firm of Kenney and Cullimore of Bakersfield, California, John Henry Maag, Architect, and C. Cullimore, Jr., A.I.A., Architect, provided the architectural design, furnished the structural engineering and have supervised the construction. A. C. King of Fresno, California, is the General Contractor.

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ALAMEDA COUNTY TO ADOPT UNIFORM BUILDING CODE

The Board of Supervisors of Alameda county is considering the adoption of the 1955 Uniform Building Code, with some modifications recommended by Marcus Carlson, County Building Inspector.

A group of East Bay engineers under the chairmanship of Jack Long, are reviewing the proposed changes together with other members of the building industry.

WAGE LAW CHANGES CAN BOOST HIGHWAY COSTS

With huge federal construction outlays in prospect, leaders in the construction industry are keeping a sharp eye on the proposed amendments to the Act which provides for much of the nation's Federal construction participation, and according to Lester C. Rogers, vice-president of the Associated General Contractors the states, with their various local problems "are eminently better qualified than the federal government to determine applicable wage rates" in contracts awarded for the expanded highway system and other public works projects projected for the next decade and a half.

MALCOLM M. McINTYRE RETIRES

Malcolm M. McIntyre, associated with the Basalt Rock Company, Inc., of Napa, California, since January, 1935, retired from active service the first part of June, in his capacity as General Sales Manager of the Aggregates Division.

Company officials announced that Joseph C. Mirani, an employee of the firm since July 1934, would be appointed to the position vacated by McIntyre.

AMERICAN SOCIETY OF CIVIL ENGINEERS—L A SECTION

Problems of flat slab design and other subjects of discussion at the recent semi-annual conference in Los Angeles will be published in detail in the JULY issue of ARCHITECT & ENGINEER magazine.

ARCHITECTURAL COURSES AT ARIZONA STATE

Consideration is being given to the possibilities of installing a night course in Architecture at Arizona State College, Tempe, and college officials are check-

PHOTO CREDITS: Moulin Studio, page 5; West Coast Lumbermen's Ass'n, 10, 13 top, 15, 17; Douglas O. White, 22; Architects Kenney and Cullimore, 24, 25; Architect John Stafford. 11; Photo-Art Commercial Studios, 12, 13 bottom, 14, 16; Dean Granger, 18, 19; and Smoot-Holman, page 23.

ng with architects of the state to determine which ields of activity should be included—Architectural lesign, Structural Design, Theory, or other.

ARIZONA REORGANIZES AIA CHAPTERS

The Arizona Chapter of the American Institute of Architects was recently dissolved and in its place two iew Chapters of the AIA have been formed.

The Central Arizona Chapter AIA, will have its ieadquarters in Phoenix, and the newly elected of-icers include: James W. Elmore, President; Martin Ray Young, Jr., vice-president; Robert T. Cox, Secre-ary; David Sholder, treasurer, and the Executive Committee comprising James E. Elmore, Robert T. Cox, Fred Weaver, Richard E. Drover, and Ralph Haver.

The Southern Arizona Chapter, AIA, will establish ind maintain headquarters in Tucson. Newly elected officers include Fred Jobusch, president; Santry C. Fuller, vice-president; Edward H. Nelson, secretary; Gerald I. Cain, treasurer; and Fred Jobusch, Edward H. Nelson, E. D. Herraras, Ellsworth Ellwood, and Emerson C. Scholer, members of the Executive Com-mittee.

ARCHITECT ELECTED PRESIDENT OF CONSTRUCTION INSTITUTE

Norman Hunter, AIA, architect of Los Angeles, has been elected president of the Construction Speci-fications Institute, a nation wide organization which recently held its annual meeting in New York City.

Elected with Hunter from California were archi-tects Vincent A. Raney of San Francisco and J. R. Liske of Sacramento, who will serve as national direc-tors of the institute.

ARCHITECT ON WORLD TOUR

Architect Gardner Dailey, AIA, of San Francisco, is currently on a trip around the world in interests of the War Memorial he is building in Manila for the American Battle Monuments Commission of Wash-ington, D. C.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

Col. William F. Cassidy, Division Engineer, South Pacific Division, Corps of Engineers, US Army, was elected president of the San Francisco Post, Society of American Military Engineers at the Society's re-cent annual meeting. Commander W. J. Valentine, Assistant District Public Works Officer, 12th Naval District, was elected 1st vice-president, and Col. Edwin M. Eads, US Air Force Installations Representative, South Pacific Region, was named 2nd vice-president.

Other officers included Bob Cook, South Pacific Division Engineers office, secretary; C. D. Koerner, 12th Naval District Public Works Office, treasurer; and directors Col. J. A. Graf, Capt. A. P. Gardiner,

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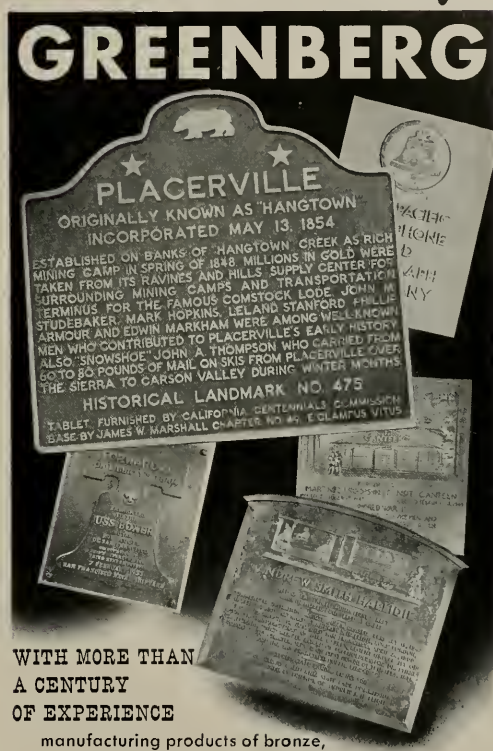
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EARTHQUAKE ENGINEERING RESEARCH INSTITUTE

The Earthquake Engineering Research Institute and the University of California Engineering Extension Division will present a World Conference on Earthquake Engineering on the campus of the University of California, Berkeley, June 12-16. The sessions will be in cooperation with the American Society of Civil Engineers, Structural Division and the Structural Engineers Association of California.

The Earthquake Engineering Research Institute, non profit, is dedicated to the development and dissemination of knowledge of earthquakes, earthquake effects, and effective design and construction to minimize the hazards of earthquakes. Since the problem is world-wide in scope the conference has been planned to bring together engineers and scientists from all of the major seismic regions so that their experience and knowledge of the problem can be shared. The conference has been scheduled to coincide with the 50th annivrsary of the San Francisco earthquake of 1906.

The conference will have as its specific objectives: 1) review of the developments of seismology and earthquake engineering at this time; 2) presentation of technical papers on seismic design and construction practices in all of the major seismic areas of the world; 3) meeting of the world's seismologists and structural engineers to create a closer liaison among the many groups concerned with earthquake problems, and pooling of their knowledge for the benefit of all mankind.

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US NAVY DEPARTMENT NEEDS ENGINEERS

The US Civil Service Commission is seeking Engineers for the Navy Department to fill positions overseas in the Pacific Area. Salaries range from $4,480 to $7,570 a year.

To qualify, applicants must have had appropriate education and/or experience in engineering. No written test is required. Interested persons may get application forms at any post office or from the US Civil Service Commission, Washington 25, D. C. Application will be accepted by the Navy Board of US Civil Service Examiners for Pacific Overseas Employment, 45 Hyde St., San Francisco 2, California, until further notice.

DRYWALL CONTRACTORS FORM STATE ORGANIZATION

California Drywall Contractors Association, with headquarters in Los Angeles, was recently formed at a meeting of industry members in Oakland, with Wayne Vaughan of Los Angeles being elected the new association's first president. Paul Johnson of Oakland was named 1st vice-president, and Hugh Hathcoat of Concord was chosen 2nd vice-president. Fred O'Haver, San Jose, was elected secretary, and Earl Kirby, Los Angeles, treasurer.

Delegates from all three of the state's drywall associations attended the meeting.

ARCHITECT EXPANDS OFFICE

The architectural offices of John Carl Warnecke, AIA, have been expanded by moving into new quarters at 111 New Montgomery Street, San Francisco.

BOOK REVIEWS
PAMPHLETS AND CATALOGUES

ENGINEERING DRAWINGS AND GEOMETRY. By Randolph P. Hoelscher and Clifford H. Springer. John Wiley & Sons, Inc., Publishers, 440 4th Ave., New York 16, N.Y. Price $8.00.

Combines in a single volume the traditional approach with modern trends, all the material needed for course work in both Engineering Drawings and Engineering (or Descriptive) Geometry. Drawing on a combined teaching experience of nearly seventy years plus many years of professional engineering practice, its authors have produced a text which combines the virtues of traditional approaches with the objectives of modern trends in engineering education. While building fundamental drafting skills, the book also stresses development of clear thinking and good judgment, and underlines the importance of drafting as a means of communication and an essential tool in engineering.

An understanding of principles is emphasized rather than mere manual skills.

ARCHITECTS' WORKING DETAILS. By D. A. C. A. Boyne. Frederick A. Praeger, Publishers, 105 W. 40th St., New York 18, N.Y. Price $5.00.

Great demand for previous volumes of Architects' Working Details encouraged the editor and publisher to publish this third volume.

The aims and purposes of this series are to accumulate an up-to-date reference library of useful working details, and thereby to provide what, at present, is lacking in architecture, a means whereby architects can exchange information to their mutual benefit.

The majority of the details in this volume were originally published in THE ARCHITECTS' JOURNAL, London, England, within the past two years.

MODERN SURVEYING — For Civil Engineers. 2nd Edition. By Harold Frank Birchal, O.B.E., D.F.C., Philosophical Library, Publishers, 15 E. 40th St., New York 16, N.Y. Price $15.00.

The aim of the author, late chief construction engineer to the Kenya and Uganda Railways, is to deal with the subject of surveying in the practical and specialized manner required by the civil engineer working in the field, or on a definite project. The book will, therefore, help the surveyor in the many difficulties confronting him while actually engaged on the job. The engineer who has to carry out important investigations without the advantage of a reference library will find in this one volume all the practical advice and hints that he requires.

This new edition has been carefully revised and brought up to date by the inclusion of descriptions and illustrations of the newer instruments and methods now available to the surveyor.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Translucent fiberglas panels for home building. Full color brochure (AIA File No. 26-A-9) pictures and describes varied uses of translucent fiberglas panels for home building and remodeling; several unique installations are pictured; 23 new decorator shades included. Free copy write DEPT-A&E, Alsynite Co. of America, 4654 De Soto St., San Diego 9.

Incandescent fixtures. New catalog describes 2'x2' incandescent fixture for schools and office lighting; data on a new achievement in color-improved lighting; hundreds of combinations of varying sizes, lens, and frame finishes are listed, including fluorescent and incandescent boxes, recessed and surface mounted. Write for free copy DEPT-A&E, Alkco Mfg. Co., 4212 N. Lincoln Ave., Chicago 18, Ill.

Ceramic tile and wallpaper. Newest decorating idea of matching designs in glazed ceramic tile and wallpaper is illustrated in a new booklet "California Coordinates" featuring

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Hermosa glazed ceramic tile manufactured by Gladding, McBean & Co., and handprint wallpaper from W. P. Fuller & Co., available in 5-basic designs and 11-color combinations; describes color schemes representing two years of study throughout the 11-western states. Free copy available write DEPT-A&E, Gladding, McBean & Co., 2901 Los Feliz Blvd., Los Angeles 39.

Ceramic tile uses. New full color booklet of particular interest to architects, builders and designers is this new 8-page brochure "Hermosa Ideas For Your World of Color" illustrating decorative uses of ceramic tile; newest designs in Hermosa glazed ceramic tile and 17-different installations in kitchens, bathrooms, living room, family room and patio; filled with ideas, practical advantages, decorative features, factual information on trim pieces and an explanation of the differences in tile glazes. Free copy write DEPT-A&E, Gladding, McBean & Co., 2901 Los Feliz Blvd., Los Angeles 39, Calif.

Wrought iron pipe for modern buildings. New, colorful 16-page booklet AIA 29-B-2) identifies wrought iron pipe and describes the composition and advantages of this special quality metal; includes sections on wrought iron's resistance to corrosion and fatigue stresses, weldability, forming and threading as well as the application of protective coatings to the material; 36 pictures and sketches; cost and availability. Free copy write DEPT A&E, A. M. Byers Co., P. O. Box 1076, Pittsburgh 30, Pa.

How to light a gymnasium. Assembles under one cover, up-to-date information on the use of fluorescent and incandescent lighting in various degrees of intensity and location to achieve precise lighting balance; discusses proper architectural and visual efficiency factors relating to uniform, well distributed gymnasium illumination with a minimum of direct glare; principals of the three levels of illumination are covered; case studies with diagramatic suggestions; charts, diagrams, photographs and tables to illustrate major points. Copy available write DEPT A&E, Pittsburgh Reflector Co., 487 Oliver Bldg., Pittsburgh 22, Pa.

The modern hospital and its elevator needs. New booklet outlines special problems and requirements of passenger and freight elevatoring and dumbwaiter service in hospitals; describes latest developments in vertical transportation; explains how vertical traffic requirements vary according to type and size of hospital, its facilities, staff and visitor traffic, distribution of food and supplies, and plans for expansion; hospitals and other specialized institutions are described, including engineering and planning, modernization, and maintenance. Write DEPT-A&E, Otis Elevator Co., 260 11th Ave., New York 1, N. Y.

Porcelain enamel in architecture. New 24-page design manual, shows how and where to use Porcelain Enamel on exterior walls, exterior trim, special details, interior walls; gives design data and specifications instructions; tell why architects use Porcelain Enamel, explains what it is and how it is made. Copy available write DEPT-A&E, Porcelain Enamel Institute, Associations Bldg., 1145 19th St., N. W., Washington, D. C.

Pumping and sewage treatment equipment. Reference manual dealing with pumping and sewage treatment equipment; detail information for determining capacities and selection vertical wet pit pumps and pneumatic ejectors; table for rating fixture units, curve for estimating pump capacity, table for determining friction of water in pipes; describes various types available and how they operate: photographs; and 2-page section devoted to sewage and industrial waste treatment systems. Copy available, write DEPT-A&E, Yeomans Bros. Co., 1999 N. Ruby St., Melrose Park, Ill.

Modern control of building temperatures from outdoors. New 4-page, illustrated bulletin, describes in detail, with diagrams, complete out-door type automatic heat controls; includes data on time switches, automatic outdoor temperature controls, "indoor-outdoor" controls; Free copy, write DEPT-A&E, Automatic Devices Co., Inc., 714 Hillgrove Ave., Western Springs, Ill.

Wood fabric folding doors. New 4-page folder shows uses, construction, specifications and installation of Warren Wood Fabric Folding Doors; describes how to save space and when and where to use. Copy available write DEPT-A&E, Warren Shade Co., 2905 E. Hennepin Ave., Minneapolis, Minn.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl.	3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.	
Cash discount on L.C.L.	2%
Trinity White, Medusa White, Calaveras White	1 to 100 sacks, $3.50 sack warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¼-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ¾-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.

Membrane waterproofing—4 layers of saturated felt, $10.00 per square.

Hot coating work, $5.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	¾x2¼ $	½x2 $425	⅜x2 $	¼x2 $
Clear Otd., White				
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
¾ x 2¼	390.00	381.00
¾ x 2¾	375.00	355.00
¾ x 3¼	395.00	375.00
¾ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

¾ x 2¼ First Grade	$390 00
¾ x 2¼ 2nd Grade	365.00
¾ x 2¼ 2nd & Btr. Grade	375.00
¾ x 2¼ 3rd Grade	240.00
¾ x 3¼ 3rd & Btr. Jtd. EM	380.00
¾ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry ..... 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
⅜-inch, 4.0x8.0-SIS 200.00
¼-inch, per M sq. ft. 240.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. I—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard $ .75
Three-coat work	per yard 1.00
Cold water painting	per yard 25c
Whitewashing	per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Wholesale Raw	Wholesale Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$.... ....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" bese @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ¼" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson. Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.

PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DECKS—ROOF (11a)
UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)
THE BILCO COMPANY
New Haven, Conn.

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)

S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)

Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028

Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)

LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)

MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)

Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)

SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)

Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)

KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., POrtsmouth 7-6760

MARBLE (23)

VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)

GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)

PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)

FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)

Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)

Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)

Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)

IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)

THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)

SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)

ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)

Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Gunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)

LE ROY OLSON CO. *(15)

ROOF TRUSSES (30a)

EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)

HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (32)

GLADDING, McBEAN & CO. *(3)

SHEET METAL (32)

Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)

Fire Doors
DETROIT STEEL PRODUCTS COMPANY

Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)

STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)

COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)

REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)

THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)

Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.

Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)

THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)

DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)

BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)

ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.765
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcAdm	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%Prom	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB 12½cv; 10cP	10cw 12½cv	10cw 1½cA	10cw 10cP; IcA	10cw 12½cv	10cw 10cP; IcA	10cw	10cw IcA			10cw	10cw	10cw
ROOFER	7½cw 7½cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw	7½cw 5cv	7½cw	8½cw	10cv		8½cw 10cv	7½cw 10cv
SHEET METAL WORKER	7½cw	7½cw 3¼cv	7½cw 3¼cv	7½cw 2%v	7½cw	7½cw	7½cw 7½cv	7½cw 4%v	8½cw 6½cv	8½cw 6½cv	8½cw	8½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP 12½cv; 2½cJIB	10cw IcA	10cw IcA	10cw 10cP; IcA	10cw 12½cv	10cw 10cP; IcA	10cw	10cw IcA			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w 1¼%Prom				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

MFG. BLDG., Van Nuys, Los Angeles county. T. T. Stanley, Sherman Oaks, owner. Reinforced brick, light manufacturing building, composition roof, concrete slab, tapered steel girders, diagonal sheathing, roll-up and store doors, steel sash, interior plaster, toilets, cesspool; 16,800 sq. ft. floor area—$68,000. CONSULTING ENGINEER: D. Arthur Lowe, Studio City.

FIRE DEPT., Fresno, City of Fresno, Fresno, owner. Contract has been awarded for construction of a Headquarters Station of the Fresno Fire Department — $146,200. ARCHITECT: Howard Schroder, Fresno. GENERAL CONTRACTOR: Long & Needham, Fresno.

BANK BLDG, Sherman Oaks, Los Angeles county. Bank of Encino, Sherman Oaks, owner 2-Story and partial basement, reinforced brick walls, frame and cast stone side wall, full glass front, structural steel, second floor is corrugated steel pan with integral wire mesh and poured concrete over, mezzanine, wood roof sheathing, composition roofing, air conditioning, terrazzo, asphalt tile and carpet floor covering, vaults, electrical and plumbing; 8000 sq. ft. floor area. ARCHITECT: R. Leon Edgar, Studio City. GENERAL CONTRACTOR: R. B. Older, Sherman Oaks.

EMPLOYEE & OFFICE BLD, Fresno. Ranchers Cotton Oil Company, Fresno, owner. Contract awarded for construction of a combination employee and office building in the City of Fresno—$19,230. CIVIL ENGINEER: Hugh Brewster, Fresno. GENERAL CONTRACTOR: F. B. Stearns, Fresno.

VETERAN'S MEMORIAL, Durham, Butte county. County of Butte, Oroville, owner. 1-Story concrete block and frame construction, laminated beams—$81,628. ARCHITECT: Thomas P. Dunlap, Chico. GENERAL CONTRACTOR: Crocker & Tandy, Richmond.

HIGH SCHOOL, Phoenix, Arizona. Phoenix Union High School District, Phoenix, owner. New high school plant includes administration building, music, home economics, industrial arts, science and classroom buildings; masonry construction, asphalt shingle roofing, slab and asphalt tile floors, evaporating coolers, ceramic veneer, insulation, steel sash, ceramic tile, gas heating system—$1,730,792 (separate steel frame contract $160,957). ARCHITECT: Lescher and Mahoney, Phoenix. GENERAL CONTRACTOR: Weeks Construction Company, Phoenix.

FOUNDRY BLDG, Oakland. Knute Palmquist Foundry, Oakland, owner. 1-Story brick and structural steel frame, corrugated galvanized steel construction — $28,000. STRUCTURAL ENGINEER: H. M. O'Neil Company, Oakland. GENERAL CONTRACTOR: James E. Fuller Co., Oakland.

MORTUARY, Lodi. Wells Funeral Home, Lodi, owner. Addition and remodel present building, cover passageway, brick veneer, 2 rolling steel doors—$41,000. ARCHITECT: Victor Galbraith, Stockton. GENERAL CONTRACTOR: Modern Engineering & Construction Company, Stockton.

MARKET BLDG, Buena Park, Los Angeles county. Impar Co., Inc., Buena Park, owner. 1-Story reinforced concrete tilt-up exterior wall, plywood sheathing with composition roofing, tapered steel beams, rotary roof ventilators, plate glass windows, aluminum entrance doors, metal siding and swinging service doors, concrete slab floor, store fixtures, slimline lighting, cold boxes and walk-in refrigerators, suspended heating, plumbing and electrical work; 200x200 ft. 50,000 sq. ft. asphalt concrete paving on rock base, flood lighting. ENGINEER: F. E. MacDonald, Jr., San Gabriel. GENERAL CONTRACTOR: Penta Construction Systems, Inc., Fullerton.

GARDEN HOTEL & COTTAGES, Mill Valley Inn, Mill Valley, Marin county. Mill Valley Inn, Mill Valley, owner. Construction includes Hotel Building and 4 tiers of cottages, frame construction; 252 rooms, baths, restaurant, kitchen, lobby, cocktail lounge, swimming pool—$2,000,000. ARCHITECT: Jack Edwards, Mill Valley. GENERAL CONTRACTOR: Edward W. Burgar, Inc., San Rafael.

HOSPITAL, Torrance, Los Angeles county. Owner c/o Contractor. V-type hospital with type I basement, composition roofing, concrete slab, resilient flooring, plumbing, electrical hydraulic elevator. Basement will contain surgeries and utility rooms; first floor will provide facilities for 50 beds; 22,000 sq. ft. of area. ARCHITECT: Herman C. Light, Los Angeles. GENERAL CONTRACTOR: Howard Miller, Los Angeles.

AUTO SALES & SERVICE, San Francisco. Clarence Krieger, San Francisco, owner. 1-Story Class 3 automobile and sales and service building, reinforced concrete frame tilt-up walls, concrete roof, parking deck — $182,450. ENGINEER: Simpson & Stratta, San Francisco. GENERAL CONTRACTOR: Hilp & Rhodes, San Francisco.

GYMNASIUM, Chadwick School, Rolling Hills, Los Angeles county. Chadwick School, Rolling Hills, owner. Gymnasium building, reinforced concrete and hollow block masonry, structural steel and miscellaneous iron and steel, steel sash, heating and ventilating, glued laminated

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beams, asphalt tile, hollow metal doors, maple strip flooring, asphaltic concrete paving; 8275 sq. ft. floor area. ARCHITECT: Flewelling & Moody, Los Angeles. GENERAL CONTRACTOR: Roessier Construction Company, Whittier.

GRAPE PRE-COOLER & STORAGE BLDG, Reedley, Fresno county. L. R. Hamilton Packing Company, Reedley, owner. Contract for construction of a pre-cooler for grapes and a storage area—$154,900. CIVIL ENGINEER: Thomas C. Kendall, Yucaipa. GENERAL CONTRACTOR: Guy Munson, Dinuba.

HOGAN SHOPPING CENTER, Ukiah, Mendocino county. Owner c/o Architect. Concrete block and frame construction; 3,000 sq. ft. floor area—$38,900. ARCHITECT: Bruce E. Heiser, San Francisco. GENERAL CONTRACTOR: John A. Nelson, San Francisco.

CHURCH, Phoenix, Arizona. St. Gregory Parish, Roman Catholic Church, Phoenix, owner. 2-Story new church building, masonry and steel construction, mission tile roof, asphalt tile, air conditioning, ceramic veneer, plastering, steel sash, vault doors, terrazzo, steel roof trusses, ceramic tile; 174x138 ft. — $310,500. ARCHITECT: Edward J. Schulte, Cincinnati, Ohio. GENERAL CONTRACTOR: Connie Construction Co, Phoenix.

CORPN YARD SHOPS, State College, San Francisco. State of California, Sacramento, owner. Two 1-story shop buildings, 22,000 sq. ft. of area; precast concrete wall panels, steel roof girders, wood rafters, plywood roof deck, composition roofing, steel sash and doors, wood studs, gypsum board, asphalt tile floor in office, acoustical ceilings, concrete walks, asphaltic paving in yard, rough grade, fencing—$174,000. ARCHITECT: State of California. GENERAL CONTRACTOR: Grenuer Construction Co, Oakland.

CHURCH, Hayward, Alameda county. First Methodist Church, Hayward, owner. Reinforced block and concrete frame and arches; 4,500 sq. ft. area — $120,000. ARCHITECT: Donald Powers Smith, San Francisco. GENERAL CONTRACTOR: N. T. Lewis, Hayward.

KNOLLS SCHOOL, San Mateo. San Mateo Elementary School District, San Mateo, owner. Frame and stucco construction; 3-classrooms, kindergarten, teacher rooms—$72,442. ARCHITECT: Falk & Booth, San Francisco. GENERAL CONTRACTOR: Barnhart Const Co., Santa Clara.

ADMINISTRATION BLDG, Transit Authority, Sacramento. City of Sacramento, Sacramento, owner. Interior and exterior remodel of present Administration building—$50,386. ARCHITECT: Harry J. Devine, Sacramento. GENERAL CONTRACTOR: Guth & Schmidt, Sacramento.

BOWLING ALLEY, Monterey Park, Los Angeles county. Monterey Lanes, Monterey Park, owner. Construction of a new bowling center containing 24-lanes, coffee shop, cocktail lounge; reinforced brick construction, composition roofing, wood roof sheathing, structural steel, insulation, acoustical tile, air conditioning, plate glass, aluminum trim, natural stone veneer, vinyl tile, toilet facilities. ARCHITECT: Erwood P. Eiden, Glendale. GENERAL CONTRACTOR: George H. Whyte, Alhambra.

DEPT. STORE REMODEL, San Francisco. Emporium-Capwell Company, San Francisco, owner. Interior remodel of the San Francisco store—$550,000. ARCHITECT: A. C. Williams, San Francisco. GENERAL CONTRACTOR: Dinwiddie Const. Co., San Francisco.

FELLOWSHIP HALL, Palo Alto. Grace Lutheran Church, Palo Alto, owner. Frame and concrete block construction, wood exterior—$39,000. ARCHITECT: Leslie I. Nichols, Palo Alto. GENERAL CONTRACTOR: Henry Knutzen Sons, Menlo Park.

CONVERT HOTEL TO APTS., Long Beach, Los Angeles county. Ralph E. Herrera, Wilmington, owner. Convert 3-story frame and stucco hotel into an apartment; 40 rooms, lath and plaster partitions, double hung wood sash, exterior to be painted only; blacktop paving—$20,000. STRUCTURAL ENGINEER: Don Erb, Long Beach.

ELEMENTARY SCHOOL ADD'N, Roosevelt School, Kingsburg, Fresno county. Kingsburg Joint Union Elementary School District, Kingsburg, owner. Frame and stucco construction; 2-classrooms — $35,965. ARCHITECT: Coates & Metz, Fresno. GENERAL CONTRACTOR: Hopkins & Son, Fresno.

DRIVE-IN RESTAURANT, San Jose, Santa Clara county. Bonaserra & Gulla, owners. 1-Story concrete block and frame construction — $162,440. ARCHITECT: Kurt Gross, San Jose. GENERAL CONTRACTOR: Oscar W. Meyer, San Jose.

VETERANS MEMORIAL BLDG, Dinuba, Tulare county. Dinuba Veterans Memorial District, Visalia, owner. Contract awarded for $284,000. ARCHITECT: Robert C. Kaestner, Visalia. GENERAL CONTRACTOR: Chester & Alexander, Visalia.

HIGH SCHOOL ADD'N, Placerville, El Dorado county. El Dorado County High School District, Placerville, owner. Frame and stucco construction of 4-classrooms, toilet facilities — $51,867. ARCHITECT: Gordon Stafford, Sacramento. GENERAL CONTRACTOR: Bingham Const Co., Sacramento.

CONTROL & GUIDANCE CENTER, Ione, Amador county. State of California, Sacramento, owner. 1-Story, concrete block masonry, wood partitions, wood roof, built-up asphalt-gravel roofing, steel sash, metal doors, wood casework, gypsum board and acoustical tile ceilings, ceramic tile and asphalt tile floors, grading and paving, mechanical, electrical; 7300 sq. ft. in area — $139,632. ARCHITECT: State of California; GENERAL CONTRACTOR: R. W. McClintock, Sonora.

SWIMMING POOLS, Senior High School, San Leandro, Alameda county. San Leandro Unified School District, San Leandro, owner. 2-Swimming pools at the Senior High School and 1-Swimming pool at the John Muir School — $152,620. STRUCTURAL ENGINEER: August E. Waegemann, San Francisco. GENERAL CONTRACTOR: Dakan Engineering Co., Alhambra

CHURCH, FELLOWSHIP HALL, Modesto, Stanislaus county. Grace Lutheran Church, Modesto, owner. 1 and 2-Story concrete block, laminated wood arches, some structural steel; combination Church, Fellowship and Sunday School building with seating capacity of 470—$221,518. GENERAL CONTRACTOR: George J. Harder, Oakland.

OFFICE BLDG, Oakland, Alameda county. 1-Story reinforced concrete construction; 10,000 sq. ft. in area, $272,304. ARCHITECT: Keith Cameron Reid, Richmond. GENERAL CONTRACTOR: Bishop, Younger & Bradley, San Francisco.

MOTEL, Palo Alto, Santa Clara county. Turkel & Slatt, Menlo Park, owner. 2-Story, reinforced concrete tilt-up concrete, frame and stucco; 39 units; swimming pool. ARCHITECT: Irving Dickstein, Sunnyvale. GENERAL CONTRACTOR: S & T Builders, Menlo Park.

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FACTORY, Long Beach, Los Angeles county. Long Beach Leasing Corpn, Long Beach, owner. Precast concrete factory building, tapered steel girders, structural steel framing, gypsum over ½" sheet rock, concrete slab, asphalt tile flooring, drywall interior, acoustical tile, projected steel sash, plastic wainscot, metal toilet partitions, automatic sprinkler system, stone facing, ceramic tile veneer panels; 60,000 sq. ft. area — $210,000. ENGINEER: George Novikoff, Los Angeles. GENERAL CONTRACTOR: Co-Ordinated Construction Co., Hawthorne.

HANGAR BLDGS, Airport, San Carlos, San Mateo county. San Mateo County Airport, Inc., San Carlos, owner. Construction of 2-hangars; one 32x300 ft, and one 42x300 ft. frame and galvanized corrugated siding, steel frame, concrete floors — $33,985. CIVIL ENGINEER: Chas. E. Randlett, Redwood City. GENERAL CONTRACTOR: Arthur Bros, San Mateo.

CHURCH, St. Monica Parish, Willows, Glenn county. Roman Catholic Diocese, Sacramento, owner. Frame and stucco construction. ARCHITECT: Chas. F. Dean, Sacramento. GENERAL CONTRACTOR: Riverman & Sons, Sacramento.

GIRLS GYMNASIUM, High School, Burbank, Los Angeles county. Board of Education, Burbank Unified School District, Burbank, owner. Construction of gymnasium at Girls High School, Burbank; reinforced concrete walls, steel framing with lightweight concrete roof deck, composition roofing, maple gymnasium floor, acoustical tile, toilet and locker facilities; demolition of building—$119,000. ARCHITECTS: Smith, Powell & Morgridge, Los Angeles. GENERAL CONTRACTOR: C. B. Royse Constn Co., Glendale.

SWIMMING POOL: Mariposa Park, Santa Clara, Santa Clara county. City of Santa Clara, Santa Clara, owner. Contract awarded for construction of a swimming pool and filter house—$34,966. ARCHITECT: L. F. Richards, Santa Clara. GENERAL CONTRACTOR: R. L. Stanley, Palo Alto.

SUNDAY SCHOOL, Berkeley, Alameda county. Calvary Baptist Church, Berkeley, owner. 2-Story frame and stucco construction; 12-classrooms — $65,426. ARCHITECT: Carlton A. Steiner, Berkeley. GENERAL CONTRACTOR: A. B. Lahti, Berkeley.

ELEMENTARY SCHOOL, Kawana, Santa Rosa, Sonoma county. Belleview Union Elementary School District, Santa Rosa, owner. Frame and stucco construction, 8-classrooms, toilet rooms, administration room — $149,900. ARCHITECT: C. A. Caulkins, Jr., Santa Rosa. GENERAL CONTRACTOR: Olson Const Co., Santa Rosa.

MUNICIPAL BLDG, Tujunga, Los Angeles county. Los Angeles Board of Public Works, Los Angeles, owner. Municipal building, 1-story, 10,000 sq. ft. area, to house Police Dept., Dept. of Building & Safety, Health Dept., City Clerk and a councilman; built up roofing, metal windows and partitions, terrazzo and marble, asphalt and acoustical tile and marble, asphalt and acoustical tile, venetian blinds, sprinkler system, parking facilities not included — $188,370. ARCHITECT: Paul O. Davis, Paul Haynes and Arthur L. Herberger, Los Angeles. GENERAL CONTRACTOR: Mayfair Constn Co., Los Angeles.

MEDICAL-DENTAL BLDG, Stockton, San Joaquin county. San Joaquin Medical Arts Corpn, Stockton, owner. 1-Story frame and stucco and brick veneer; 16,000 sq. ft. of area—$275,000. ARCHITECT: Zemke & Hartfelder, Glendale. GENERAL CONTRACTOR: Craft Const. Co., Stockton.

WAREHOUSE & OFFICE, San Francisco. Standard Realty Co & Development Co, San Francisco, owners. Warehouse to contain 30,000 sq. ft. floor area. Office

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will have 3,000 sq. ft.; reinforced concrete tilt-up construction, wood roof, composition roofing, concrete floors, sprinkler system. ENGINEER: August E. Waegemann, San Francisco. GENERAL CONTRACTOR: Haas & Haynie, San Francisco.

COUNTY - HEALTH BLDG, Martinez, Contra Costa county. Board of Supervisors of Contra Costa County, Martinez, owner. 3-Story, ground level parking, reinforced concrete, aluminum sash, rubber, asphalt, ceramic and terrazzo tile floors—$445,950. ARCHITECT: Jack Butcher & Associates, Orinda. GENERAL CONTRACTOR: Greuner Const Co., Oakland.

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PAPER CONTAINER PLANT, San Jose, Santa Clara county. International Paper Co., New York, owner. 1-Story reinforced concrete tilt-up, steel sash, rolling doors, air conditioning, bridge crane, boiler room, lunch room, terrazzo floors; 155,000 sq. ft. floor area. STRUCTURAL ENGINEER: David E. Edwards, Maywood. GENERAL CONTRACTOR: Associated Const & Engineering Co., San Francisco.

HOSPITAL ADD'N, Sunnyslope, Arizona. John C. Lincoln Hospital, Sunnyslope, Arizona, owner. Addition will contain therapy rooms, dining room, offices, patient rooms, X-ray room, storage area; built-up roofing, slab and asphalt tile floors, air conditioning, cement veneer, insulation, plastering, steel sash, acoustical tile — $104,134. ARCHITECT: Edward L. Varney and Associates, Phoenix, Arizona.

MULTI-DECK PARKING, Glendale, Los Angeles county. Glendale City Council, Glendale, owner. Multiple-deck parking facility in Glendale, 2-story, 3-tier, and partial basement, reinforced concrete lift-slab decks and fabricated steel posts; 243-car capacity—$303,587. CONSULTING ENGINEER: Bowen, Rule & Bowen, Consulting Engineers, Los Angeles. GENERAL CONTRACTOR: E. I. Noxon Constn Co and Ellis J. White Co., joint venture.

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Among the winners were George D. Griffen of La Canada, California, sponsored by Lee & Daniel, Pasadena; James C. Keck, Jr., of Fontana, California, sponsored by the Kaiser Steel Corpn; and John D. Miller, Tulsa, Oklahoma, sponsored by the Patterson Steel Company of Tulsa.

Winners may attend any one of 129 accredited colleges offering degrees in civil engineering or architectural engineering.

REFRIGERATING ENGINEERS ELECT ASHLEY PRESIDENT

Carlyle M. Ashley, chief staff engineer at Carrier Corp., Syracuse, N. Y., was elected president of The American Society of Refrigerating Engineers at the Society's 52nd annual meeting in Cincinnati.

He formerly served as first and second vice presidents and treasurer of ASRE, and also as chairman of the finance, program, research, technical coordinating, membership relations and professional development.

Other officers elected at the meeting included: Hermann F. Spoehrer, vice president and treasurer of Sporlan Valve Co., St. Louis, Mo., 1st vice president; Cecil Boling, president, Bush Mfg. Co., West Hartford, Conn., 2nd vice-president; Daniel D. Wile, vice president of Refrigeration Engineering, Inc., Los Angeles, Treasurer, and among newly named Directors was Charles T. Hamilton of Vancouver, B.C., a consulting engineer.

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SCHOOL BONDS APPROVED

Voters of the Rio Linda Elementary School District, Rio Linda, Sacramento County, recently approved the issuance and sale of $500,000 in school bonds, the funds to be used for the construction of new Elementary Schools and additions to existing school buildings in Rio Linda.

In addition to the special funds obtained from the school bond issue, the district has been granted a State Aid of $1,900,000.

CHAPEL AND A NEW EDUCATIONAL UNIT

Ponsy & Stoops of Covina are preparing drawings for construction of a 1-story, rigid steel frame and stucco exterior chapel with educational units for the Bassettdale Community Church.

The chapel will be 36 x 75 ft. in area and attached educational units 30x145 ft. in area to house 8 small classrooms and 6 large assembly rooms. Crushed rock roofing, steel casement and louvered sash, cement and asphalt tile covered floors, interior plaster, acoustical plastered ceilings, forced-air heating, kitchen, and restroom facilities.

ARCHITECTURAL FIRM IS NEWLY ORGANIZED

H. W. Underhill, AIA, Architect, of 4313 Leimert Boulevard in Los Angeles, has announced the association of Rodney A. Wagner, and in the future the firm will be known as Underhill and Wagner, Architects.

NEW MILLS HIGH SCHOOL

The architectural firm of John Lyon Reid & Partners of San Francisco has completed preliminary drawings for construction of the new Mills High School buildings which are to be built on the Mills Estate near the town of Millbrae in San Mateo county.

The reinforced concrete and frame constructed, with some structural steel, buildings will provide facilities for classrooms, science, homemaking, library, music, arts and crafts, auditorium, cafeteria, boys and girls gymnasium, shops, toilets and locker rooms, and administration.

The cost of the work, $3,900,000, has been obtained through the sale of school bonds voted at a recent special election.

LOCKHEED MISSILE SYSTEMS BUILDS SUNNYVALE PLANT

The manufacturing unit of the Lockheed Missile Systems division's new Sunnyvale facility will be a single story building with tilt-up concrete walls tied into steel frameworks and a poured gypsum roof. Measuring 600x160 feet, on a 275 acre site near Moffet Field, the building will be a combination of factory area and office space. Offices will have acoustical ceilings and fluorescent fixtures.

The manufacturing building will feature a reception lobby and an exterior treatment of field stone and large glass panels.

Routt A. Bryant is resident engineer of the construction project, according to Donald J. Murphy, director of the firm's manufacturing and plant services.

CONSTRUCTION SURVEY COOPERATIVE EXPANDS

The Construction Survey Cooperative of New York, which was founded in 1922, has announced the opening of Western Division offices at 2920 Beverly Blvd., Los Angeles, under the direction of C. L. Weeks, C.E., F.C.S.I.

The firm will serve as consultants in the field of architectural, structural, electrical and mechanical assays; estimates, quantity analyses, appraisals, purchase requisitions, and supervision.

FULLERTON PERMITS TOP $10,000,000

Building permit valuations for the first four months of this year had a total value of $10,054,703, according to William Vasvary, building superintendent.

During the period 1388 permits were issued.

ARCHITECT JOHN S. BOLLES GETS GENERAL MOTORS JOB

San Francisco architect John S. Bolles, AIA, has been selected by General Motors Corp'n of Detroit, Michigan, to design the company's new $30,000,000 plant which will be constructed in the Sunnyvale, California, industrial development area.

Construction of the facilities, which will start sometime this fall, will represent one of the largest projects ever undertaken in Northern California, according to architect Bolles.

GREYHOUND BUS DEPOT

The architectural firm of Skidmore, Owings & Merrill, 1 Montgomery Street, San Francisco, is preparing plans and specifications for construction of a new Greyhound Bus Depot to be built in the City of San Jose for the Pacific Greyhound Lines, at an estimated cost of $600,000.

The new depot will be 1 story, 115 x 245 ft.; reinforced concrete, air conditioning, structural steel canopy over the loading platform, and coffee shop.

LOW RENT HOUSING

The engineering firm of Ohm & Ecklund, 41 N. Hunter Street, Stockton, is preparing plans and specifications for construction of a new Low Cost Housing Project to be built at Thornton, Sacramento County.

The project consists of 30 buildings, providing 40 units; 1 story, concrete block and frame construction with concrete floors.

HOTEL-MOTEL SAN FRANCISCO

Architect George Meu, 693 Mission Street, San Francisco, is preparing plans for construction of a 225-room and bath hotel-motel building to be built at the corner of Pine and Mason Streets in San Francisco, at an estimated cost of $2,500,000.

The project will include skyroom and restaurant; 14 stories, 4 levels of garage in basement, Class I, reinforced concrete and structural steel.

ARCHITECT SELECTED

Architect Jerome Kasavan of Salinas has been commissioned by the Northern Monterey County Union Elementary School District of Moss Landing, to draft plans and specifications for the construction of a new Elementary School to be built near Castroville in Monterey county.

The new school facilities will include 11-classrooms, kindergarten, manual arts, dining room and kitchen, administration, toilet rooms, and a garage for school bus.

CHURCH BUILDING

Architect Gates Burrows of Santa Ana is completing working drawings for construction of a grouted brick masonry church, office, and social hall, to be known as St. Mary's by the Sea at Laguna Beach,

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for the congregation of the Episcopal Church of Laguna Beach.

The 1-story and basement building will have cement asbestos shingle roof with laminated wood trusses, asphalt tile and wood floors, basement with cement slab floor, interior plaster, acoustical tile, wood sash, forced air heating, plumbing, electrical, toilet facilities, tile floors and wainscots, asphalt paving—$90,000.

NURSES SCHOOL AND RESIDENCE

The architectural firm of Neptune & Thomas, Pasadena, are completing drawings for the construction of a school and nurses' residence in Arcadia for the Methodist Hospital of Southern California.

The new facilities will include a laboratory, classrooms, lecture room, library, administration offices, auditorium, reception room, recreation room, and accommodations for 100 student nurses.

HOSPITAL BUILDING

Architect Albert W. Kahl, 18 2nd Avenue, San Mateo, is preparing plans and specifications for construction of a 25-bed Hospital building in Escalon, San Joaquin County, for the Pioneer Memorial Hospital of Escalon.

The new building will be 1 story and of frame and stucco construction with aluminum sash, and concrete and vinyl tile floors.

CONTAINER CORPORATION STARTS SANTA CLARA PLANT

Ground breaking ceremonies were held in Santa Clara recently for a new Container Corporation of America boxboard mill and storage warehouse, which will actually start operation in July 1957 and will have a top daily production of 150 tons.

Located on a 60-acre property, the new will will have an operating area of 100,000 square feet and a warehouse area of 32,000 square feet. Construction will be of tilt-up concrete, with built-up gravel roof; columns and roof framing will be of structural steel; and a special feature will be the driving of piles under the paper machine and all stock preparation equipment, to assure proper alignment of all production units.

The new facilities were designed jointly by Albert C. Martin and Associates of Los Angeles, Architects and Engineers, and the Container Corporation engineers.

MACHINE SHOP

Consulting Engineer H. L. Standefer, 4344 Laurel Canyon Blvd., Studio City, is completing plans and specifications for construction of a masonry machine shop building in Burbank for H. M. Keller Company, 2311 Empire Avenue.

The building will include: composition roof, tapered steel girders, concrete slab, rotary roof vents, electrical and plumbing work. Estimated cost is $25,000.

WALT DISNEY WAREHOUSE

Structural Engineer William T. Wheeler, 2033 W. 7th St., Los Angeles, has completed plans and specifications for construction of a Type 5 warehouse at 2400 W. Alameda Avenue in Burbank for Walt Disney Productions.

Costing an estimated $200,000, the building will comprise: composition roofing, concrete slab, toilets, office area, plumbing, electrical and complete warehouse facilities.

ELEMENTARY SCHOOL

Architect Gerald Matson, 537 G St., Eureka, is completing plans and specifications for construction of an addition to the South Fortuna Elementary School in the City of Fortuna, for the Fortuna Elementary School District.

Work will include 8 classrooms and toilet rooms; frame and stucco construction.

NEW NAVAL UNIT FOR SAN DIEGO

Work has started on the construction of the main building for the Fleet Sonar School at San Diego, designed for the 11th Naval District by Kistner, Wright & Wright, Los Angeles architects and engineers.

The building, first of its kind on the Pacific Coast, will house sonar equipment and instruction space for training military personnel in the use of sonar detection devices, under conditions simulating actual operations. Three stories in height, and of steel and concrete construction, it will cost an estimated $1,884,600.

AUTO CLUB BUILDING

Architects Weimer & Fickes, 6 N. 1st Ave., Arcadia, are preparing plans and specifications for construction of a 1-story frame and stucco building on Mission Drive in San Gabriel for the Inter-Insurance Exchange of the Automobile Club of Southern California.

The new building will contain 4700 sq. ft. of area, concrete slab and asphalt tile covered floors, air conditioning, and paved parking area.

LOS ANGELES FEDERAL BLDG.

Early selection of a site for the proposed new Federal Custom House and Office Building to be built in Los Angeles is a possibility if Congress acts favorably.

The project will cost some $20,000,000 and will probably be erected in the Civic Center area.

COUNTY JAIL BUILDINGS

Architects Ernest & Lloyd, John C. Lloyd, architect, of 2132 No. El Dorado Street, Stockton, have completed drawings for construction of a new County Jail building to be built at French Camp for the County of San Joaquin.

The new building will be 1-story, Type-I, reinforced concrete, metal roof deck; and will provide facilities for administration offices, and drunk and vagrant tanks. Estimated cost of the project is $260,000.

KAISER CENTER OFFICE BLDG

The architectural firm of Welton Beckett & Associates of 5657 Wilshire Blvd, Los Angeles, is preparing preliminary drawings for construction of a 25-story office building to be built in Oakland for the Henry J. Kaiser Company.

The office building will include a penthouse and a 3-tier basement; reinforced concrete and structural steel, aluminum, glass, 15 elevators, escalators to the 2nd floor, dining room to seat 650, kitchen; parking provision for 1,150 automobiles; 850,000 sq. ft. floor area. Estimated cost is $17,000,000.

NEW ELKS CLUB HOUSE

Architect Bernard G. Nobler, Brewster-Warren Bldg., Redwood City, is preparing plans and specifications for construction of a new Elks Club building to be built on Jefferson Avenue in Redwood City for the Redwood B.P.O. Elks Lodge No. 1991.

The new building will be 1-story, frame and stucco construction and will contain 15,000 sq. ft. of floor area. A basement is included in the plans.

GYMNASIUM BUILDING

Architect Floyd B. Comstock of Walnut Creek is preparing drawings for the

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68 Post Street San Francisco

construction of a new gymnasium building for the San Ramon Valley Union High School District, Danville.

Funds for construction of the new school facilities have been raised through issuance of school bonds, approved at a recent special election.

APARTMENT BUILDING

Architect Harry M. Newman of Palo Alto is preparing preliminary drawings for construction of a 2-story, with basement, Apartment Building to be built in Vallejo.

The building will be of frame and stucco construction and will contain garage area.

GOLF CLUB HOUSE

The architectural firm of Lillis & Smith of Vallejo is preparing plans and specifications for construction of a Golf Club House to be built near Suisun for the Green Valley Country Club of Suisun.

The building will contain a lounge, coffee shop, kitchen, men's and women's locker rooms, pro shop, and will be of frame and concrete block construction.

RESTAURANT IN FULLERTON

The architectural firm of Rowland & Associates, Fred V. Johnson, Architect, Anaheim, is preparing drawings for construction of the "El Comedor" restaurant in Fullerton for Lea Palm. The structure will consist of masonry exterior, slab floor, composition roof, plaster interior, fireplace, carpeting and cork flooring, acoustical plaster, ceiling, laminated beams, air conditioning; 4000 sq. ft. floor area. The estimated cost is $80,000.

FRATERNITY BUILDING

The architectural firm of Ratcliff & Ratcliff, 2286 Fulton street, Berkeley, has completed drawings for construction of new 3-story, frame and stucco fraternity building to be built on Warring Street in Berkeley for Phi Kappa Sigma Fraternity.

SCHOOL BONDS APPROVED

Voters of the Fillmore Elementary School District recently approved a proposal to issue and sell school bonds in the amount of $445,000 to finance the District's school expansion program.

Included are plans for construction of 8 classrooms, an office and cafeteria-auditorium at the San Cayetano school; construction of 3 classrooms at the Sespe Street School; supplying the new classrooms and cafeteria with equipment; and effecting the connection of the entire three school plants, Sespe, San Cayetano and Mt. View.

APPAREL STORE

The architectural firm of Hertzka & Knowles, 85 Post St., San Francisco, is completing plans and specifications for construction of a new 3-story apparel store building to be built on the corner of Post and Kearny Streets in San Francisco for Moore's Clothing Store.

The building will contain 20,000 sq. ft. of area, 1 elevator, reinforced concrete, basement, and will cost an estimated $750,000. Present building on the site is being razed for the new construction.

ATOMIC ENERGY BUILDINGS

The Atomic Energy Commission, J. E. Armstrong, directing engineer, Oakland, recently announced that Federal funds had been allocated for the construction of additional buildings to the Livermore plant.

The new appropriations provide for a new Metallurgy Laboratory to be built at a cost of $2,270,000; a High Explosive and Weapons Plant, to cost $1,100,000; a Mechanical Shop addition to present facilities at a cost of $300,000; and a new Programming Building which will cost $180,000.

MASONIC LODGE

The architectural firm of Butner, Holm & Waterman of Salinas is preparing preliminary drawings for construction of a Masonic Lodge Building to be built on South Main Street in Salinas, for the Salinas Masonic Hall Association, at an estimated cost of $350,000.

The new building will be 1-story, reinforced concrete tilt-up, some marble veneer, glazed hollow tile partitions, vinyl tile and vinyl asbestos tile, ceramic tile, maple floors, and will contain facilities for a lodge room, banquet hall and stage, kitchen, club rooms, lounge, billiard room, storage, and rest rooms.

WOMEN'S DORMITORY COLLEGE OF PACIFIC

Architects Clowdsley & Whipple and Howard G. Bissell, Associates of Stockton are preparing plans and specifications for construction of a new Women's Dormitory building to be built on the campus of the College of the Pacific, Stockton.

The new facilities will be of 1 to 3 stories in height, frame and brick veneer

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and will provide for 400 women. Estimated cost of the work is $1,400,000.

RESTAURANT AND COCKTAIL LOUNGE

Architect William D. Concolino of Monterey is completing drawings for construction of a new Restaurant and Cocktail Lounge to be built on Fisherman's Wharf at Monterey.

The new building will be 1-story, frame construction, with lots of plate glass; vinyl tile floors and on pile foundation. It will contain 6100 sq. ft. of floor area.

PAROCHIAL SCHOOL AND CONVENT

Architect Gerald M. McCue of Berkeley is preparing preliminary drawings for the construction of a Parochial School and Convent and Chapel at the St. Felicitas Parish in San Leandro for the Roman Catholic Archbishop of San Francisco.

The new buildings will be of frame and stucco construction.

NEW JUNIOR HIGH SCHOOL

Architect Donald S. Macky of Oakland is working on drawings and specifications for the construction of a new Junior High School to be built in Napa for the Napa Union High School District.

The new facilities will include classrooms, administration, science, home making, gymnasium, cafeteria and shop building, toilet rooms, etc.

GENERAL MOTORS ASSEMBLY PLANT

Architect John S. Bolles of San Francisco is working on preliminary drawings for the construction of a General Motors Assembly Plant to be built in Sunnyvale for the General Motors Corporation of Detroit, Michigan.

The new facilities will provide assembly of Buick, Oldsmobile and Pontiac automobiles and will contain 1,500,000 sq. ft. of area. Buildings will be structural steel frame, brick and glass construction.

HOSPITAL ADDITION AT CONCORD

The architectural firm of Confer & Willis of Oakland is completing drawings for construction of a 56-bed addition to the Concord Community Hospital in Concord, for the Concord Community Hospital District, at an estimated cost of $1,250,000.

The addition will be 1 and 4 story, reinforced concrete construction, aluminum sash, air conditioning and will contain 50,000 sq. ft. of floor area.

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COVER PICTURE

PETRINI SUPER-MARKET
San Francisco

SEWALL SMITH, Chief Architect
THE JOHN J. MOORE CO.,
Architect

Modern supermarket built on site of former street car barns. See page 17 for details.

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EDITORIAL NOTES

HIGHWAY CONTRACTING INDUSTRY

The highway contracting industry can give assurance to the public that it has the capacity to carry out the expanded highway construction program authorized by Congress, and can do it promptly, efficiently and in such a manner that the public will receive increasing value for its investment in the nations highway construction program.

The majority of highway contractors have the "know-how" and capacity to meet current construction requirements and can increase their production capacity easily with the supervisory personnel and equipment already at hand. Thus the industry can meet the need for expanded capacity.

From a cost standpoint, highway construction costs have been fairly stable, and can be expected to continue in line with any expanded construction program. A mile of highway has been costing more as it becomes wider, thicker, straighter, and required more land and more structures. But continued research, cooperation between highway officials and contractors in improvement of contract documents, administrative procedures, and specifications; new machinery; and the pressure of competition have been bringing about more efficient operations so that the public can afford the highway improvements it wants.

Competition is one of the strongest forces working toward increased efficiency in construction operations and this has been increasingly a keen competition factor between highway contractors for new work coming on the market. As additional contractors are attracted to the highway field by the new legislation, this keen competition will continue.

Most essential materials will be in adequate supply for the expanded highway program, although there may be some delays in deliveries of structural steel for bridges in a few localities.

While no large construction program ever gets started without its headaches, the public can be confident that highway officials and all segments of the construction industry, can work out any problem so that the overall program of building the nation's highways will be carried out promptly and economically.

* * *

SELF-HELP FOREIGN AID

While members of Congress debate the relative merits of grants and loans, neither of which will ever be repaid, to foreign nations, the World Bank and free enterprise capital have combined to work for the "development of the underdeveloped member countries."

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Of the total $2\frac{1}{2}$ billion in loans now on the Bank's books, one-third are for electric power, one-third for agriculture, industry and general purpose loans, and the remainder for transportation. Loans are self-liquidating in nature and are strictly supervised and regulated.

One-third of the loans made by the Bank are in Latin America, another third in Asia and Africa, and the remaining third in Europe. The Bank's purpose is to bridge the gap until a private source of capital becomes available and officials of the bank try to work to a point where loans can be sold to private investors.

The Bank's original source of income was from subscriptions from its 59 member countries. At the present time, the Bank is obtaining additional funds by selling bonds in various currencies all over the world. To date there have been no losses and no defaults in the ten years of the Bank's operation.

The World Bank is building a fabric of international credit, while assisting foreign nations on a self-help basis.

* * *

SMALL BUSINESS COLLAPSE!

In 1955, the United States economy underwent a fantastic boom. So far in 1956, we have been resting on a plateau of high-level employment and, by and large, widely shared prosperity.

But 1956 is also a "political year." As a result, there are those who feel that their political fortunes rest on finding flaws in our state of economy. One of the strangest arguments being used in this connection is the contention that small business is virtually in a state of collapse and in danger of being "wiped out." This argument has it that "big business" is getting bigger every day, while small business is "giving up" through mergers and seeing their profit margins disappear.

Critics have rarely troubled to define precisely what a "small businessman" is. The Small Business Administration, charged with the responsibility of assisting small business, says: "The Agency frankly recognizes that no definition can eliminate possible inequities in view of the great diversification and complexity of our industrial and distribution structure."

We might say that a "small businessman" is a businessman that stands less than five feet in height. In any event the records show that the big businessman and the little businessman are enjoying an economy never before known.

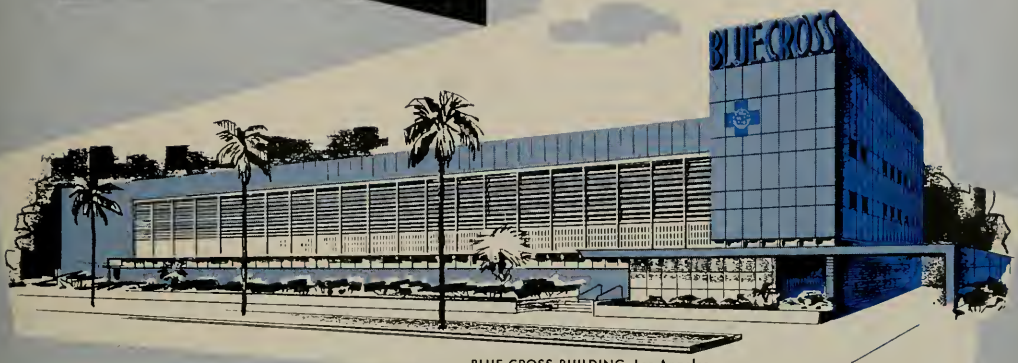
* * *

Under present federal income tax laws, to keep $64,000, you would have to win $448,711. —Let's go for broke.

LONG RANGE PLANNING WITH

PORCELAIN *enamel*

FOR THE BUILDING INDUSTRY



BLUE CROSS BUILDING, Las Angeles
Architects: ALLISON AND RIBLE, A. I. A.
General Contractor: FORD J. TWAITS CO.

ANOTHER outstanding architectural achievement...designed to meet functional and structural needs for today and many decades to come.

Virtually the entire exterior of this building is protected by Architectural Porcelain Enamel fused to the inherent strength of steel. The locked-in beauty of this lifetime material insures that future years will find this structure as fresh and modern as today!

The versatility of Porcelain Enamel provides complete design freedom...with choice of any color of the spectrum—and finishes ranging from high gloss to semi-matte.

WRITE TODAY for latest details and Color Chart.

● *Architectural Porcelain Enamel used for veneer, louvers, soffits, sills, jambs and headers.*

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NEWS and COMMENT ON ART

CALIFORNIA STATE FAIR ANNUAL ART EXHIBITION

A major change in the Arts Show at this year's California State Fair and Exposition, August 29 through September 9, will be the judging of paintings in a single group. There will be no separation of modern and conservative.

Exhibiting, however, will be in a graduated order from conservative to modern, assuring each painting of an advantageous position.

Prize money this year will be the same as previous years, $11,385.00, according to Bert J. Abraham of Bellflower, director in charge of the Arts Show. Each member of the judging panel will select one-fifth of the entries to be exhibited. A total of $2,300 will be offered for oil paintings, including three purchase awards of $600 each and 10 non-purchase awards of $50 each. Watercolors, pastels, tempera, and Gouache class entries will be offered $800 in premiums, and original print entries $350.

There also will be a special class of student art

(See page 8)

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park

San Francisco

MADAME BOUDREY
as the Muse Erato
Signed and dated 1752

JEAN MARC NATTIER
French, 1685-1766

One of eight Masterpieces recently presented to the Museum by Rascoe and Margaret Oakes.

Look to Hermosa GLAZED CERAMIC Tile *for Kitchen Ideas that sell homes faster!*

SALES RECORDS are proving again that the fastest-selling homes have beautiful kitchens. That's why Gladding, McBean & Co., makes every effort to offer the widest selection of color, size, shape and texture in genuine Hermosa *glazed ceramic* Tile...as well as tile-setting ideas that save time and add sales appeal to every job.

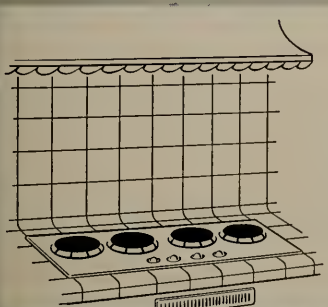
CHECK these advantages in beauty and practicality for kitchens: the Hermosa 3-way drainboard package and fireproof Dura-Glaze for counter top cooking.

3-Way Drainboard Package

LARGE RADIUS COVE. New, Lock-Set° Cove has time-saving snap-in aligner and squared-off back and base for accurate setting.

STREAMLINED CAP. Nu-Vit° Cap is lower, over 2" wide for greater bonding area, floats in with mortar bed, cuts your installation time. Available in Dura-Glaze to match deck.

FLUSH SINK EDGE. Surface Bullnose with 5/16" radius. Also available in Dura-Glaze to match deck.



Counter Top Cooking

BUILT-IN UNITS, surrounded by famous Dura-Glaze Hermosa Tile, provide essential protection. The Small Homes Council of the University of Illinois recommends that "every surface cooking unit should have heatproof areas adjacent..."* Select Hermosa Dura-Glaze Tile; it is fireproof, scratch resistant, stain resistant.

*"Small Homes Council's copyrighted circular C5.33, 'Separate Ovens'."

EXCLUSIVE TILE FEATURES developed with genuine Hermosa, answer the demands of buyers for beauty and permanence...provide the luxury in kitchens and baths every family wants...make your homes wanted by more buyers. Specify Hermosa, the complete line for all types of glazed ceramic tile.

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LOS ANGELES • SEATTLE • PORTLAND
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Member, Producers' Council, Inc.

NEWS and COMMENT ON ART . . .

(From page 6)

with $2,625 in premiums, along with exhibits of sculpture, ceramics and enameling, metalwork, jewelry, and textiles.

First place winners, with the exception of those in sculpture, jewelry, and metalwork, will become a permanent part of the State Fairs art collection.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is presenting a special summertime exhibition for visitors to the Museum, including the following:

EXHIBITS: Paintings by Andres Curuchich, depicting scenes of Comalapa, Guatemala; Paintings by Andrew Wyeth; A Century and a Half of Painting in Argentina; Paintings by Frederick Wight; San Francisco Discovery, presenting a group of photographs by the Bay Area Photographers; Prints, Counterpanes, and Related Printed Fabrics of the 18th and 19th Centuries, from the Collection of Mr. and Mrs. Robert Bartlett Haas; Creative Photographs by Wynn Bullock; and a Mid-Century Review, showing German watercolors, Drawings and Prints, 1905-1955.

EVENTS: Classes in Art Enjoyment for Adults including Painting for Pleasure—Exercies in Perception; the Painting Workship for Amateurs; and Seminars in the History of Art. For the Children, classes are offered in Picture Making, Art and Nature, and the Art Club.

The Museum is open daily.

THE CERAMIC NATIONAL SYRACUSE MUSEUM

The National Ceramic Exhibition, formerly an annual but now a biennial and conceded to be the ranking competitive event in the American ceramics field, will open at the Syracuse Museum of Fine Arts, Syracuse, New York, on Sunday, November 4, according to a recent announcement by Anna W. Olmsted, director of the Museum.

Prize winners and other selected entries will be circulated at museums throughout the nation following exhibition in Syracuse. Full details are available by writing the Syracuse Museum.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., has arranged the following group of special exhibitions and events for July:

EXHIBITIONS: Sport in Art, an exhibition, sponsored by the magazine Sports Illustrated, of about 120 paintings, watercolors, sculptures and prints with sport as their theme; Paintings by Maurice Lapp; Paintings from the Collection of Walter P. Chrysler, Jr.; and The Third International Hallmark Art Award Exhibition.

The ACHENBACH FOUNDATION for GRAPHIC ARTS: At the Museum, a showing of Interpretations of Nature by Ch'i Pai-Shih, "The Ancient of the Mountain"; and an exhibition of Rembrandt and His Influence. The Loan Exhibition at the San Francisco Public Library is a group of color lithographs, "Views of the Holy Land," by David Roberts and Louis Haghe.

SPECIAL EVENTS: A special Organ Program each Saturday and Sunday at 3:00 p.m.; educational activities include Art Classes for Children, classes in art for Adults, and tours. The Museum is open daily.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is presenting the following schedule of exhibitions and special events for this month:

EXHIBITIONS: A showing of International Color Woodcuts, organized by the Victoria and Albert Museum of London, England; Three California Painters—Clayton Pinkerton, Fred Reichman, and Peter Shoemaker; Charles Burchfield Retrospective, organized by the Whitney Museum of American Art, New York City; Photographs, by Ralph E. Joosten and Philip Thiel; Pacific Coast Art, an exhibition of the United States' representation at the Third Biennial of Sao Paulo, 1955; and Expressionism, 1900-1955.

SPECIAL EVENTS: Lecture tours based upon current exhibitions each Sunday at 3 o'clock; Wednesday Evening Art Discussions at 8:30; and among activities —Art for the Layman, and Adventures in Drawing and Painting, and Childrens Saturday morning Art Classes.

The Museum is open daily.

EXHIBIT OF GUATEMALAN PRIMITIVES AT deYOUNG

Scenes of Comalapa, in Guatemala by the Guatemalan primitive artist, Andres Curuchich, will be shown at the M. H. deYoung Memorial Museum in San Francisco, July 12 through the month of August. Though well known in his own country the work of Curuchich has been secured for its first exhibition in the United States by the deYoung Museum through the generous help of a prominent Guatemalan businessman, at one time a resident of San Francisco, who after virtually discovering Curuchich has acted as the artist's patron.

Curuchich, a full blooded Indian, lives in the little village of Comalapa accessible only by dirt road where he was born and where he has spent his 60 odd years.

PYROFILL ROOF DECKS FEAR NO FIRE

Detail of PYROFILL roof deck used in the new Grand Central Industrial Center, Glendale, California. Engineering and construction by Coordinated Construction, Inc. Planned, developed and administered by John B. Kilroy, Realtor, and Associates. George Nevikoff, structural engineer, Anning-Johnson Co., Pyrofill roof deck contractor.

Selected for this 180-acre California industrial center . . .

PYROFILL* roof decks

INCOMBUSTIBLE GYPSUM

Analysis proved no other roof deck but PYROFILL offered all these advantages:

LOW INITIAL COST—The combination of low unit erected cost and savings in sprinkler installation gave PYROFILL an outstanding advantage.

INCOMBUSTIBLE—PYROFILL fears no fire. The extra fire safety gained from PYROFILL decks was of interest to prospective occupants.

INSURANCE SAVINGS—PYROFILL received the lowest insurance rate of all decks considered.

LOW ROOFING MAINTENANCE COSTS—Experience has shown PYROFILL to be an ideal base for built-up roofing. This cuts roofing maintenance costs to a minimum.

ADAPTABLE—PYROFILL is suitable for flat, curved, or pitched roofs. No other material was adaptable enough to meet individual occupants' requirements.

FAST INSTALLATION—A pouring schedule as high as 20,000 square feet per day permitted early occupancy. No costly curing delays. Roofing applied within an hour of pouring.

SEISMIC FORCE RESISTANCE—Expensive cross bracing was eliminated by using the PYROFILL deck as a horizontal diaphragm. PYROFILL meets the requirements of Uniform Building Code, California Division of Architecture, and all codes of the city and county of Los Angeles.

For full information, see Sweet's Catalog Section 2E/UN, contact your U.S.G. Representative, or write Industrial Sales Department, 2322 West Third Street, Los Angeles 54, California.

*T. M. Reg. U. S. Pat. Off

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UNITED STATES GYPSUM

the greatest name in building

HIGH VISIBILITY OF DISPLAY

WARMTH AND BEAUTY OF FIELD STONE

BURKE, KOBER & NICOLAIS—Los Angeles

DESMOND'S PASADENA

PASADENA, CALIFORNIA

By HAROLD J. NICOLAIS
A.I.A. ARCHITECT

In planning the new Desmond's Pasadena store, several unique and highly important requirements were presented.

Desmond's has a long history of successful operation of men's and women's specialty shops in Southern California, but this was to be their first store located in a marketing area such as fashionable South Lake Street in Pasadena.

In effect we were asked to create an ultra-smart architectural design to fit the location, combined with

USE OF BRICK WALL around parking lot, plus large plantings adds to suburban atmosphere.

an interior design providing maximum selling space and merchandising efficiency.

Other factors to be considered included a lot which sloped from front to rear, and the fact that foot traffic on the street is relatively small compared with a heavy auto traffic moving fairly rapidly.

To provide the greatest possible selling space, we recommended that the building be designed to fit the lot line on all sides, without the use of offsets, recesses or any other architectural treatment which would decrease useable floor area.

To create an interesting and beautiful exterior and to present a highly visual front to the auto traffic on the street, large expanses of plate glass windows and doors in aluminum trim were provided. The use of field stone and decorative tile on the front gave the warmth and suburban atmosphere desired. An over-the-sidewalk canopy and hanging awning was used for weather and sun protection for this western exposure.

Because the 200-car parking lot had to be located at the rear, we provided a second "front door" there. And, adding to the suburban feeling, we made use of brick walls and large plantings around the parking lot and its store entry way.

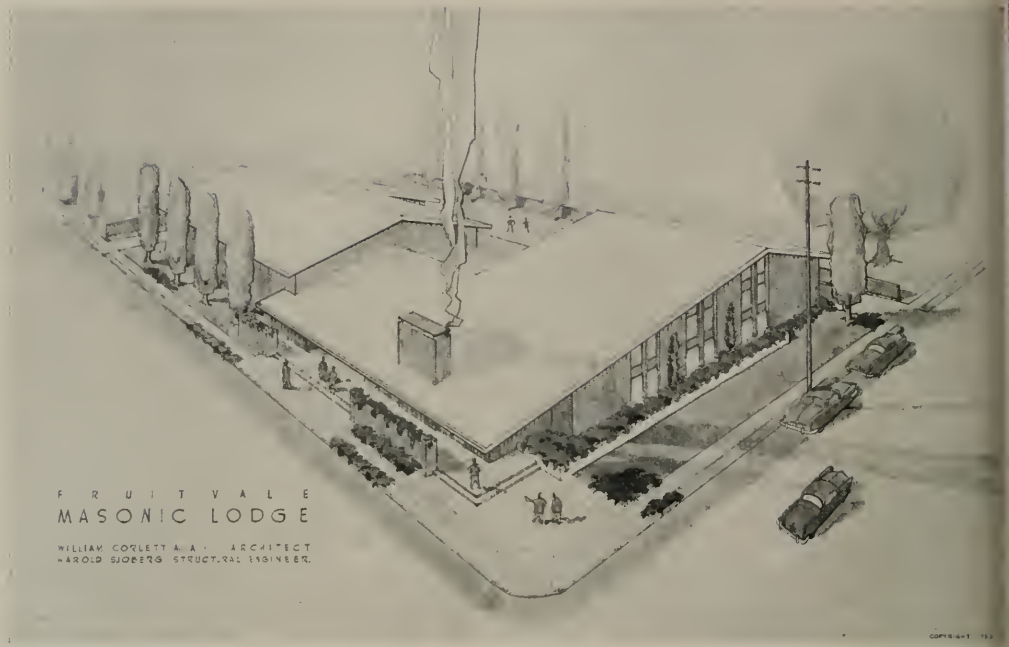
In planning the merchandising function of the store, we recommended a 100 per-cent visualization treatment, which stresses the availability of all merchandise and the ease of shopping here.

To this end we made use of wire glass railing panels on all stairways, with the result that every department in the store is visible from the front door.

The interior consists of three levels. Here we made use of the sloping lot, providing a lower level midway in the building and reached by a wide stairway. The mezzanine, over the lower level, is reached by a stair-

(See page 36)

FROM MEZZANINE STAIRWAY—high visibility and freedom from obstructions is apparent. Stairway rail panels are of wire-glass.



HAROLD O. SJOBERG, Structural Engineer

JAMES GAYNER, Mechanical Engineer

FRUITVALE
NEW MASONIC TEMPLE

OAKLAND, CALIFORNIA

ARCHITECTS:
CORLETT AND SPACKMAN, AIA

LANDSCAPE ARCHITECT:
RALPH JONES

GENERAL CONTRACTOR:
N. H. SJOBERG & SONS

Historically, Masonic Temples throughout the nation have been conservatively and rather uniformally designed. They have been multi-storied structures of stone masonry and steel, or concrete and steel, leisurely ornamented with a variety of cast plaster classic motifs. Traditionally the Lodge Rooms were almost without exception placed on an upper floor and quite often the main street floor space was designed and developed for commercial use and devoted to income producing store areas. This customary practice eliminated the possibility of building a structure that would truly serve all of the many and varied activities carried on in the community by a Masonic Lodge and its affiliates.

When the San Francisco architectural firm of William Corlett and Wendell Spackman, A.I.A., Archi-

tects, were commissioned by authorities of the Fruitvale Masonic Lodge to design and supervise construction of their new, modern, Temple on Fruitvale Avenue at Galindo Street in Oakland, there was no limiting commitment for the architects to follow the traditional pattern of building design. Instead the architects were given free reign to use their extensive background of knowledge and experience to develop a structure best adapted to fit the building site and embodying a maximum utility of specialized use.

As a matter of fact a special Lodge Building Committee, composed of progressive thinking fraternity members including Theodore Bean, Frank Killinger and Raymond Nichols, worked very closely with the architects to produce a new Masonic Temple that is a radical departure from the staid practices of the past, and at the same time represent a practical solution to the organization's building project. The end result has been an attractive, highly practical, Lodge praised by the Grand Lodge's Building Committee Chairman as "the most attractive and functional Temple in California."

The attractive one-story, L-shaped building, as designed by the architects includes a spaciou 40x48 foot windowless Lodge Room with all essential facilities at the ground level and served by numerous adjacent storage rooms; a cozy Lounge Room complete with an attractive fireplace; a large Banquet Room 40x54 feet, which is equipped with a 13x20 foot Stage and platform area directly opposite from the Lounge; and an adjacent Dining Room of 18x25 feet which is served by a completely modern kitchen having the facilities to prepare and serve up to 500 meals.

The Building contributes to form an outdoor Patio, which is located immediately off the small dining room. The Patio has been terraced and is equipped with a large Barbecue Pit, easily accessible to the Kitchen area, and provides ample facilities for enjoyment of out-door meals during the time of year when weather conditions, and the Bay-area climate is inducive to outdoor events.

The Temple's attractive appearance is largely attributable to the architect's liberal use of many building materials in their natural state, and this factor is

NIGHT VIEW of the attractive entrance—liberal use of decorative brick adds to charm and warming appeal.

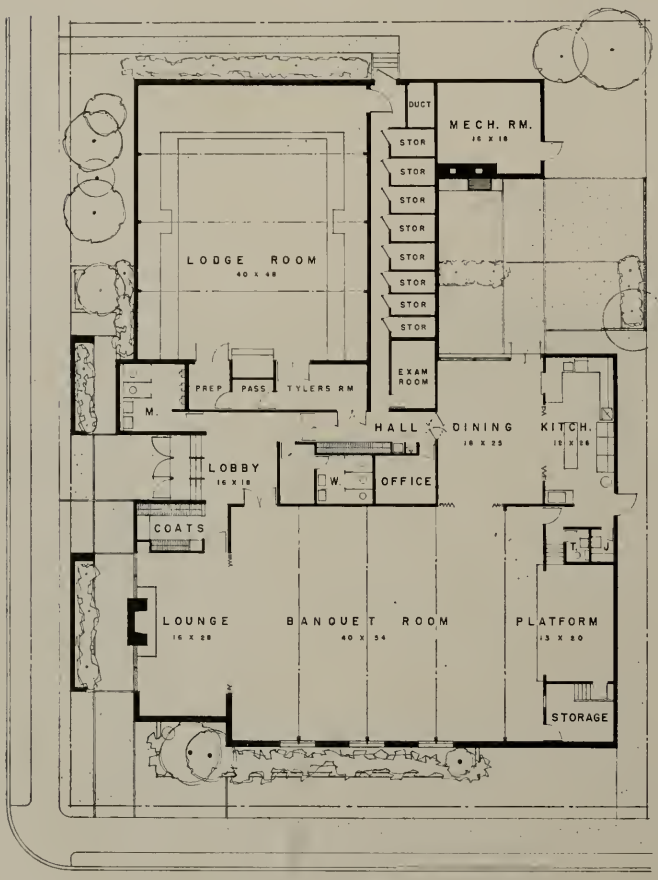
probably a peculiarly well-suited approach to the design of a modern Temple to house Masons and their activities.

All exterior walls are of 4"x8"x24" concrete block. These were laid up with aligned joints and then left exposed on the interior surfaces, thus giving an attractive "natural" appearance and appeal to the interior of the building when combined with properly selected furnishings.

The spacious 40x48 foot Lodge Room is spanned with laminated wood arches that remain exposed and support an acoustical tile ceiling, while the Banquet Hall has been designed to use laminated wood columns and beams in construction, together with acoustical ceiling. The wood columns and beams also remain exposed and give a unique and pleasant appearance to the room's interior decor.

The interior partitions of the building are all wood framed and then covered with a ¼ inch thick mahogany plywood.

Use of fiberglass lanterns to light the Banquet Room presents a unique yet very effective lighting appearance which contributes greatly to the enjoyment of the room. Lodge Room lighting is indirect and emi-



FLOOR PLAN

F L O O R P L A N

LODGE ROOM DETAIL . . . exposed wood roof trusses and beams, indirect lighting, exposed brick walls and carpeted floor.

AUDITORIUM (below) acoustical ceiling, hardwood floor and exposed overhead beams; unique lighting and exposed beams.

nates from a perforated metal trough along the ridge of the ceiling and is conveniently controlled by a dimmer.

Furnishings of the Lodge Room altar, including the desks, were designed by the architects and utilize a motif of black iron, mahogany, and marble.

The Temple is shared by several Masonic Lodges, Eastern Star groups and Rainbow Girl groups and serves famously all of their varied formal and informal activities. It is so planned that the Lodge Room may be used by one group, while at the same time another group may be holding a banquet or conducting another activity in another part of the building. Certainly this completely modern functional building will encourage other lodges to construct Temples that contain the same dignity and character together with the many other aspects that allow for complete use of the building by many groups.

The building is frequently rented by other civic groups for special luncheons, dinners and banquets, receptions and other functions so that it becomes a truly self-supporting facility of the Lodge, equivalent to the traditional commercial or retail store.

CONSTRUCTION DETAIL of dais section of the large lodge room.

OLD CAR-BARN SITE

NEW SUPER MARKET

SAN FRANCISCO, CALIFORNIA

SEWALL SMITH, Chief Architect
THE JOHN J. MOORE CO.

When the automatically controlled doors of Petrini's Plaza supermarket opened recently in San Francisco, it represented the life long ambition of Frank Petrini, meat market owner of San Francisco, to build the finest market "anywhere", and the store opening represented the culmination of more than two years of planning and construction by the John J. Moore Company, general contractors of Oakland and Los Angeles, which is now headed by Maxwell Reid.

Petrini's life-time desire was to build "the most beautiful and glamorous meat market in the whole world." Embodied in it he wanted the best super-

PETRINI PLAZA . . .

Frank Petrini, market owner, and Sewall Smith (right), architect, discuss construction detail.

market layout and features, plus innumerable ideas of his own for the preparation and handling of foods that would insure the utmost in quality and service for customers.

Architect Sewall Smith, chief architect of the John J. Moore Company, a company which has many times demonstrated its knowledge and ability in the construction of supermarkets, shopping centers, and other major projects in the construction field, welcomed the opportunity and unusual challenge offered by Petrini. Together with a completely integrated organization of architects, engineers and construction experts, the many ideas of Petrini, Reid, Smith and staff members R. H. Cooley, Jerry Moore and Faye Comeau, engineers; Robert Lustig, coordinator; Suzanne Hambleton, senior draftsman and Jack Stimes, job superintendent, took form and became a reality with opening of the facilities for public use during a three day festival spearheaded by George Christopher, mayor of San Francisco.

The architecturally colorful two-story building contains some 57,000 square feet of area, plus an even larger customer parking area, faces on a large tree-

MARKET interior . . . modern lighting, refrigeration and display.

lined site formerly occupied by one of San Francisco's street car barns. The modern type structure of reinforced concrete, contains merchandising facilities for such tenants as an Owl Drug Store, a complete bakery, a combination produce and grocery, fish, poultry, delicatessen, and liquor departments. In the center of the building is a large meat department. The spacious meat display area is serviced by three elevators that speed the finest cuts of meats to butchers on the customer level, from the huge upstairs preparation center. Roller conveyors speed purchases to the customer.

One of the outstanding features of the meat display is a glass enclosed rotating display of meat that Petrini calls "the ballet of the beef." The entire department has been designed to bring excitement and pleasure to an otherwise everyday sort of business.

The building itself takes advantage of its sloping site. Provision is made for a loading and parking deck on the roof over the drug store. The mezzanine accomodates many offices and the second floor not only takes care of the vast refrigeration and meat preparation and storage areas, but also gives unusual character to the exterior seldom seen in markets.

Design of the building employed the use of precast concrete panel walls in 20 by 12 foot sections, flat poured and lifted into place by crane. Panel joints were recessed to create a strong architectural pattern. Full air-conditioning, heating, acoustical ceilings and fluorescent lighting are other features of the project.

The "Certified Lighting" system specially designed for and installed in the building, has sufficient capacity to light about 100 average homes, and lets the customer see merchandise the way it really looks.

Maxwell Reid describes "Certified Lighting" as "something we have needed for a long time because it allows design on a nationally recognized standard. This assures our client that he is getting the benefit of years of expert study by illuminating engineers and store managers all over the country. Standards have been developed from the findings of the Illuminating Engineering Society and have been approved and adopted by the National Electrical Manufacturers' Association."

SPACIOUSNESS for product display and customer convenience.

EICHLER HOMES, Palo Alto — A. QUINCY JONES, AIA

PROJECT
RESIDENCE
PALO ALTO, CALIFORNIA

ARCHITECTS:

JONES & EMMONS
Los Angeles

LANDSCAPE ARCHITECT:

KATHRYN IMLAY STEDMAN
Palo Alto

The home pictured here was a special project of the builder, Eichler Homes, Palo Alto, California, the architects, Jones & Emmons of Beverly Hills, California, the landscape architect, Kathryn Imlay Stedman, A. A. of Palo Alto, Matt Kahn of the art department of Stanford University and his wife, Lyda Kahn.

The landscape architect and the artists endeavored to create a stimulating extension of the architecture of the house and to integrate their own creations with the mood of the structure. The specific first use to which the completed project was put was the housing of the works of local painters, ceramicists, weavers and sculptors and museum pieces from Stanford University.

The house itself is a four bedroom, two bathroom house of about 1700 square feet of living area, with a two-car garage. It is a refinement of a house which won a special citation from Life magazine and was

published in their October 10, 1953, issue.

The construction is post and beam with conventional stud wall. The ceilings are 2" x 8" redwood with a built-up roof. The exteriors are 1" x 8" redwood, milled to Eichler Homes own design, and applied vertically over 30# felt. The interior walls are Philippine mahogany paneling. The floors are cork tile. The heating system is hot water radiant in the slab, controlled thermostatically and capable of maintaining a temperature of 70° with the outside temperature at 30°, heat loss through the windows and the natural insulating tendency of the cork floors taken into account. Sliding glass doors open from the living-room area, from the master bedroom and one children's bedroom. Windows are horizontally sliding with bonderized steel frame and weatherstripped. Roof is insulated. Kitchen counters are process covered and the kitchen sink is stainless steel. Equipped with refrigerator and built-in dishwasher. Cabinets are trimmed in birch and equipped with movable shelves and sliding hardboard panels finished with plastic paint. The doors are hollow-core. Bathtubs and shower tubs are equipped with sliding glass shower doors.

The house uses a central entry hall plan, permitting access from the entry to the kitchen, living room or bedroom wing without passing through another part of the house. The house is oriented to the rear garden through large areas of glass and the garden itself

INTERIOR . . . view looking toward patio and pool, spacious floor to ceiling glass end-wall, exposed wood ceiling, asphalt-tile floor.

becomes intimate through the use of softly curving lines screened with hedges and plantings and the original site walnut trees. The specially designed pool is illuminated. The fence pattern, wrought iron sculpture, fence mosaics and mobiles further soften the space and repeat the pattern of the garden and of the plantings and flowers.

The architect, A. Quincy Jones, is an A.I.A. gold medal winner.

Definitely a distinctive Patio and pool area

DISTINCTIVE ENTRANCE

HAGGARTY'S NEW STORE

PASADENA, CALIFORNIA

ARCHITECTS:
BURKE, KOBER & NICOLAIS;
HAROLD J. NICOLAIS, A.I.A.

CONSULTING STRUCTURAL ENGINEERS:
HILLMAN & NOWELL

ELECTRICAL ENGINEER:
MICHAEL J. GARRIS

GENERAL CONTRACTOR:
C. L. PECK & CO.

Haggarty's new store, recently opened in the South Lake street shopping district of Pasadena, is fresh proof that economical store construction can be reconciled with the clients demand for a lavish look and air of tradition.

Designed by Burke, Kober & Nicolais, Haggarty's Pasadena presented an interesting problem in design since the traditional elements of the French 18th century school of architecture had to be incorporated into a steel-and-concrete building suitable to Southern California. This problem was solved on the exterior by adapting the general proportions of the period (height, width, and openings), and on the interior by the use of high ceilings and clear vistas to create the spacious look that is so characteristic of the period.

On the interior, the design feature that serves as a focal point for the whole store is the "grand stairway" leading up to the wide rotunda that frames an elaborate imported chandelier of rococo cut glass (hung on a 1,000 pound winch so that it can be lowered for re-lamping). In structure, the stairway is a combination of reinforced concrete and bent steel box girders. The open look of the store is enhanced by its lacy iron balusters and polished brass handrail that adapt a traditional look to its functional construction.

The stairway's primary asset to Haggarty's is, of course, psychological, and in that respect it has been a notable success. Women customers feel any effort involved in climbing it is more than repaid by the illusion of grandeur it gives them. (One husband was heard to say that the stairway cost him a coat, and since the opening of the store the cumulation of many such examples has convinced the management of Haggarty's that the stairway was well worth the cost in space and construction.)

The building itself is a Type I construction with masonry exterior walls, the main floor is concrete slab on grade, and the second floor is concrete slab supported by concrete columns. The roof is an insulated steel deck supported on steel trusses and columns. The whole structure consists of 35,000 square feet; 20,000

of which is devoted to selling area, plus adjoining parking for 72 cars.

The building is completely air conditioned, and an interesting feature is the fact that the air conditioning unit has been fitted with smog filters.

Haggarty's Pasadena has its own primary electrical transformer which carries the load of not only the lighting, heating and air conditioning, but of elevator and electrically operated dumb waiter. The transformer is of 2400 volt/120; volt capacity was specially designed for the local power company's future changeover to 4160 volt primary service.

The interior design in selling areas, the basic structure of high ceilings (15 feet high on the street floor and 12 feet high on the second floor), wide arches, and gracefully rounded columns is carried out in fixtures and decoration that prove most successfully that modern materials can be made to create an atmosphere of tradition. Bleached woods, antiqued mirrors, direct and indirect lighting (both fluorescent and incandescent), lavish use of color and polished brass, plastic laminates, planting, and even the final, practical use of special material on the loose equipment that will have the hardest wear. All of these eminently practical materials have been handled in the shapes of tradition, yet applied to withstand the intense wear of customer traffic that would have warped the Petite Trianon in a matter of weeks.

"The choice between traditional and contemporary design," says the architect, Harold J. Nicolais, "is a matter of individual taste and both are bound, by the equal influences of tradition and progress on our lives, to have their share in influencing building today. To the architect, the basic difference between the two is that contemporary design can often be approached through the structure, but when the client's demand is for traditional design, the elements of structure, utility and economy must be molded and adapted to the shape and essential atmosphere of the tradition to be followed.

"Traditional design can offer as great a challenge to the architect's ability as do any of the other fixed elements—such as use, cost, climate or terrain — with which he is destined by profession to work."

A REFRESHING LOOK

Architectural design of this modern store shows an interior of originality and richness

SORORITY RESIDENCE

OMICRON CHAPTER, KAPPA ALPHA THETA
University of Southern California, Los Angeles

ALBERT C. MARTIN AND ASSOCIATES
Architects & Engineers

A three-story residence for the Omicron Chapter of Kappa Alpha Theta sorority, 653 West 28th Street, Los Angeles, provides spacious living quarters for fifty sorority members attending the University of Southern California.

Working closely with the architectural firm of Albert C. Martin and Associates, architects and engineers who designed the building, in developing the design philosophy for the project were Mrs. Howard M. Lockie, Mrs. Bruce Rushton and Mrs. William D. Armistead, who were appointed as a building committee by the general alumni.

The residence contains twenty two-girl rooms plus a dormitory for ten, on the upper floors. Rooms are supplied with two couchbeds, built-in desks, wardrobes and bureau storage. A separate area for the storage of bouffant gowns is provided so that maximum closet space is realized in the rooms.

The house mother occupies a suite on the second floor.

Clothes-care facilities include an automatic washer, clothes-dryer and electric ironer. Hair-drying equipment is supplied, along with a separate towel-dryer.

The modern kitchen features stainless steel, while the large dining area may be divided by two folding panels so that intimacy or spaciousness is achieved as required.

Throughout the building, emphasis has been placed on the comfort and convenience of the residents. Large, handsome freestanding fireplaces are included in the living areas. Color and decor were coordinated by the architectural firm and Carroll Sagar and Associates of Beverly Hills.

Of steel, wood and stone construction, the building features aluminum sliding doors and sash, rubber flooring tile and base, light-diffusing hung plastic ceiling, acoustical tile and Philippine mahogany paneling. Generous planting areas indoors and out create an attractive garden effect, with patio areas provided for outdoor relaxation.

The project was completed by L. D. Richardson & Co. at a cost of approximately $200,000.

AMERICAN SOCIETY OF CIVIL ENGINEERS
LOS ANGELES SECTION DISCUSSES PROBLEMS

FLAT SLAB DESIGN AND CONSTRUCTION

Problems of flat slab design and construction provided timely material for discussion by a panel of experts in the structural field at the 1956 Spring Meeting of the Structural Group, Los Angeles Section, American Society of Civil Engineers. The organization is one of several formed in recent years by ASCE to better serve the needs of practicing engineers, and works in close cooperation with the Structural Engineers Association of Southern California. Meetings held twice yearly and usually feature technical panel discussions of current interest.

Moderator, Ernst Maag of the California Division of Architectures, briefly reviewed the historical development of Flat Slab Construction, noting that it is characterized by concrete slabs lacking supporting beams except at the margins, and that "lift slab" construction is a special case in which enlarged heads of columns (known as capitals) and thickened portions of the slab around the capital (known as drop panels) are often omitted to permit multiple casting of slabs one on top of the other, prior to lifting to place in the finished structure. Flat slabs are generally suitable for buildings preferably three or more bays in width with fairly regular column spacings of the order of 17 to 30'. Savings in form work and overall reduction in building height where fire resistance and live loads of 100 PSF or more are requirements are other factors influencing the selection of this type of construction.

Problems of the design office were treated by Morris Zuckerman, Chief Engineer for the firm of Austin, Field and Fry, who noted that drop panels were generally economical only for spans over 25 feet supporting live loads of 125 PSF and up. Columns should be designed for moments resulting from unequally loaded panels or uneven column spacings. Where dealing with lift slabs it should be noted that columns generally are lacking in stiffness, and that special loading conditions are imposed during construction. Consequently analysis of the slab as a continuous frame is recommended to properly evaluate not only the effect of the live load but the moments due to lifting (wherein the outer ends are generally cantilevered), the moments during the time cantilever ends are being jacked into final position, and the moments after the marginal pours are made and the jacks are being removed.

Robert Adolphe, Structural Engineer, with the Los Angeles City Building Department, presented some findings resulting from recent studies of the deflection characteristics of slabs erected in recent years. In rare instances deflections of the order of 2 to 2¾ inches have been observed after slabs have been in place 14 months. Large deflections and related cracking have been observed where thin slabs without capitals or drop panels have been used on long spans (generally over 25 feet), and exterior walls have been characterized by a large proportion of window openings. Possible causes were noted as being torsional rotation of exterior spandrel beams, use of uniform steel spacing within column strips and lack of reinforcing extended adequately beyond the point of inflection. As a result of these investigations the City of Los Angeles has evolved additional requirements for flat slab construction above those given by the American Concrete Institute Code.

Gerald Bowen, of Bowen, Rule and Bowen, discussed this same problem with a background of wide experience, including his work as developer of the Presan Method of model analysis. He pointed out that with long spans and small columns shears were apt to be critical, and that large deflections have often been observed where "shear head" reinforcing was used. Deflections based on the elastic theory do not predict accurately the total long time deflections, for the effect of plastic flow is often great. Addition of compression steel in the bottom of the slab at the support has been beneficial in reducing deflections as has been the use of large (1½ to 1¾ inch) aggregate in the concrete where possible. A minimum slab thickness of L/36 is satisfactory up to 25 or 30 feet, but a minimum thickness of L/32 is preferrable where spans achieve the magnitude of 32 to 36 feet. Column strip steel should be varied in spacing so that approximately 60% of the steel falls within the inner half of the strip.

Proposed revision of the ACI Code specifically as related to Flat Slab Construction was covered by Dr. Vernon Jensen, C. F. Braun Company. Dr. Jensen, a member of the ACI Committee charged with responsibility for recommending such changes, noted that the applicable chapter has been completely rewritten. The basic choice of design by elastic analysis

(See page 35)

Rendering by JACK FINNEGAN

ROBERT M. SHERMAN, Designer

THE VILLA-GARDEN HOTEL

SAN MATEO, CALIFORNIA

220,000 Sq. Ft. Area **Cost $4,000,000**

The construction site is a long "L" shaped parcel of property with a frontage on the main thoroughfare, El Camino Real, of 200 and some odd feet and a frontage on Forty First Avenue of a little over 200 feet.

One of the particular site problems was a nineteen foot difference in grade elevation between the two street frontages which were fixed elevations. This problem was over-come by developing the plan in a series of wings and ramping the corridors between these wings in a manner to accommodate the grade change without giving the feeling of going up or down stairs. This site problem had a reflected effect on the design of the overall project inasmuch as these several minor changes in building elevation dictated a functional rather than a period design, therefore a contemporary theme was utilized throughout the entire planning of the structure. It being also the philosophy of the designer, Robert M. Sherman, that when using present day materials and techniques in construction, it is only logical to express their composition in contemporary form.

The selection of materials was based on initial cost, expected life, maintenance cost and the effect these materials would have on insurance rates. With these thoughts considered the major materials were established as steel, reinforced concrete, travertine, glass, aluminum, terrazzo and tile.

One of the most unique deviations from conventional construction was the use of pre-cast concrete wall panels. The building module was established to adapt to the use of such material. These panels were manufactured at Napa, California, shipped direct to

(See page 35)

INTERESTING CONSTRUCTION

Sliding glass doors in several suites will provide a general view of the main entrance area of the hotel. Wrought iron balcony railings will be installed.

View from just outside the main lobby, shows sweeping contemporary lines of the new structure. Driveways will continue through the archways into the inner courtyards so patrons can park cars virtually in the front of their rooms. (Lower).

(Photos Courtesy Michel & Pfeffer Iron Works, Inc.)

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SAN DIEGO CHAPTER

"How to Live Better Electrically" or "Meet Mrs. Swenson," a moving picture by the General Electric Company featured the July meeting held at Bali Ha'i. Dan Turner representing the General Electric Company presented the picture and an evening of entertainment.

The film "Architecture—USA," prepared by the AIA was shown to the public at the recent San Diego County Fair at Del Mar, through the effort of S. Bruce Richards, Public Relations Committee.

Member Roy Drew has been elected President of the La Jolla Town Council.

OREGON CHAPTER

Robert B. Price, A.I.A. Architect of Tacoma, Washington, was a recent speaker before Chapter members meeting in "Irelands" at Lloys, Portland.

Price also served as a juror in the Chapter's first annual Honor Awards which considered some fifty-five buildings submitted by twenty-three offices.

PASADENA CHAPTER

Architect Herman Light, AIA, Los Angeles, member of the National Panel of Arbitrators of the American Arbitration Association, was the principal speaker at the July meeting held at Eaton's Santa Anita.

Light spoke on the legal aspects of architectural problems involving litigation, and spoke particularly on numerous cases of arbitration in which he has taken part.

A film "Engineered Timber Construction," was also presented during the evening's program.

New members include: Burdette M. Pulver, Jr., Richard Kyle Weimer, and George Swain Conner, Corporate Members; and Associates James F. Geary and Raul P. Rosales.

CALIFORNIA COUNCIL OF ARCHITECTS

William Corlett, chairman of the 1957 convention advisory committee in charge of the program for the Annual Convention of the California Council of Architects scheduled for October 10-14 in Yosemite Park, has announced that two full days of the convention will be devoted to a program of professional subjects. The Council's Home Building Industry, Hospital and Health, Architectural Practice, Public Relations, and School Building Committees will present an outstanding speaker from fields allied with that of architecture to keynote seminars of those

WILLIAM CORLETT
Convention Chairman

Directors: David Vhay, Edward S. Parsons, M. DeWitt Grow, John Crider, Lawrence Gulling. Office of President, 131 W. 2nd St., Reno.

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ALLIED ARCHITECTURAL ORGANIZATIONS

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Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institute—Los Angeles:

D. Stewart Kerr, AIA, President; R. R. Coghlan, Jr., Vice-President; W. F. Norton, Secretary; Malcolm Lowe, Treasurer. E. Phil Filsinger, Liaison Officer, Producers' Council, Gladding, McBean & Company.

committees. These speakers will also sit as a major panel for discussion of subjects close to the practice of architecture at the close of the professional sessions.

Registration and reservation forms will be mailed to all architects and members of the Producers Council early in August. Corlett urges they be returned promptly to facilitate handling of convention details.

The Board of Directors announced that the 1957 Annual Convention would be held at the Hotel Coronado, October 2-6.

CENTRAL ARIZONA CHAPTER

Design Awards from the Chapter were recently awarded to Frank M. Henry, 1st year; and to Gerald L. Thayer, 2nd year, students at Arizona State.

Al Spector recently appeared before Chapter members and discussed the functions of the Arizona State Planning and Building Commission.

SOUTHERN CALIFORNIA CHAPTER

Richard Neutra, F.A.I.A. Architect, was the principal speaker at the July meeting held in the Hollywood Athletic Club, Hollywood, taking as his subject "The Architect and His Collaborators in the Modern World."

The speaker discussed the roles of the architect, the consulting engineers and the designers from allied professions in developing the contemporary building. Neutra illustrated his remarks with slides taken during recent visits to Europe, South America, the Orient, and India.

CALIFORNIA CAMPAIGN TAKES SOLID FORM

Henry L. Wright, AIA, of Los Angeles, chairman of the Joint Architects-Engineers Committee advocating public approval of California State Senate Constitutional Amendment No. 6, has announced that the proposition has been given a number and will appear on the November ballot as Proposition 10.

Deeply concerned with seemingly avoidable delays in the construction of public works projects, members of the California State Legislature proposed a statute which permits the state to employ private architects and engineers on a contract basis when such contracts

(See page 34)

WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and G. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

Structural Engineers Association of Northern California

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Structural Engineers Association of Central California

C. M Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Sec.y-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

THE FEMINEERS

Mexican dolls and carts on the luncheon table of the Femineers July meeting in the Elks Club, San Francisco, provided an appropriate setting for the program presented by Mrs. Manley W. Sahlberg and Mrs. Joseph P. Haas.

Mrs. Sahlberg and Mrs. Haas conducted members on a trip through Mexico by colored slides, showing highways and cities around Mexico City. Also shown were Mexico City, various resorts and shrines, typical plants and animals, the Mexican people and other interesting subjects.

Mrs. C. Russ Araff of Danville, Mrs. F. R. Freece of Lafayette and Mrs. Will Adrian of San Leandro assisted in presenting the "South of the Border" program.

SOCIETY OF AMERICAN MILITARY ENGINEERS—San Francisco Post

Rear Admiral J. F. Jelley, CEC, USN,, was the principal speaker at the July meeting of the Society in the Presidio Officers Club, Presidio of San Francisco.

Admiral Jelley spoke on the subject, "Seabee Operations in the Pacific," and because of his position as director of the Pacific Division of the Bureau of Yards and Docks, and Commander of the Tenth Naval Construction Brigade, was able to present many interesting and educational phases of the work of the Seabees.

New members include Lt. Col. K. N. Flory, N. F. Smith, Jr.; Col. Eugenio Buitrago, Jr.; H. N. Nicholson, F. W. Gordon, Lt. F. R. Cunha, Col. Robert N. Swartz, M. R. MacKall, R. G. Jones, K. C. Waggoner, M. A. Chernich, Otto M. Vikre, Capt. K. G. Crosby and R. A. Benson.

UNIVERSITY OF ILLINOIS NAMES ENGINEERING HEAD

Nathal M. Newmark, University of Illinois Research Professor of Structural Engineering, has been named head of the Civil Engineering Department of the University, effective September 1st. He succeeds W. C. Huntington, who retired following thirty-six years as head of the department.

Professor Newmark joined the Illinois faculty in 1930 and has been a full professor since 1943. Active in more than twenty professional societies and committees, he is concerned particularly with structural analysis and design, including elasticity theory, numer-

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

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Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

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American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

Col. Wm. F. Cassidy, President; Cmdr. W. J. Valentine, 1st Vice-President; Col. Edwin M. Eads, 2nd Vice-President; Bob Cook, Secretary; C. D. Koerner, Treasurer. Directors Col. J. A. Graf, Capt. A. P. Gardiner, P. W. Kohlhaas, C. G. Austin and C. R. Graff.

ical methods, arch bridges and concrete bridge floors, and the effects of bombs or earthquakes on various types of structures.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The annual picnic at the Turtle Rock Ranch on the north slope of Mt. Diablo, incidentally reported to be one of the "best" yet held, also served as the July meeting. Complete returns of the various events are not available at present; however, scores were better and performers at their peak, according to all reports.

New members: Richard B. Gould and Darrell W. Halligan are recent additions to the Junior Member roll.

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

A check-list of employment practices criteria for the guidance of professional engineers and their employers has been distributed to engineers, industrial executives, and engineering schools by the National Society of Professional Engineers.

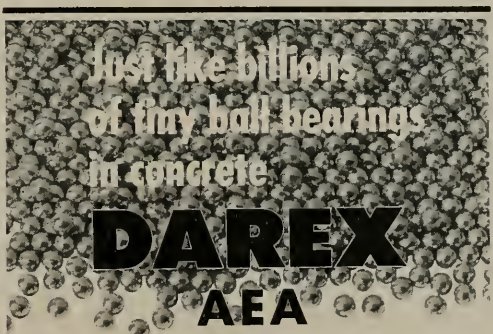
Topics included in the criteria are recruitment, indoctrination, technical, administrative, personality and professional development of the individual, salaries, engineering titles, personnel practices, and termination policies.

The criteria were developed by the Engineer-in-industry sub-committee of the Employment Practices Committee of the National Society.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

Timber construction in general and fire hazards in particular were subjects of a recent meeting held in the Rodger Young Auditorium, Los Angeles, with Ben Benioff, Ted Combs and Harry Bolin presenting new and up-to-date information on heavy timber construction.

The subject of fire as related to timber construction and insurance is not new, but one of the recent noteworthy developments in timber engineering is a move on the part of the timber industry and the engineering professions to gather data and evaluate the position of timber as a structural material from a fire-safety standpoint. Harry Bolin, SEAOSC member of long standing, knows as much about this subject as anyone else in the country. Shortly after the American



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* *Naturally, it's our own survey. Like to see the full report? Shape chart and specification details also available for the asking from* KRAFTILE CO., *Niles, Calif.; or* WASHINGTON BRICK & LIME CO., *Spokane, Wash., members of*

WESTERN STRUCTURAL TILE INSTITUTE . . . . . .

Institute of Timber Construction was formed, the subject of fire and its relation to timber was presented to the fabricators as an outstanding project for research and development. Harry Bolin was selected to carry out this program and for many months has traveled throughout the country visiting fabricators and insurance companies gathering and evaluating data.

Fire insurance is big business, said Mr. Bolin. The General Motors fire in 1953 cost insurance companies some 30 million dollars. One of the most annoying problems in fire insurance is the wide divergence of rates. There are 37 fire rating bureaus in the U. S.; the West Coast alone has four. Rates vary between stock and mutual companies. Classification of cities, a factor in establishing rates, is accomplished by a complicated demerit system. It was pointed out that the rate on two identical buildings in the same locality can vary as much as 400 per cent because of complexities and inequalities in the establishment of these rates.

Mr. Bolin stated that wood has taken the blame for many fire catastrophes where actually the primary source of structural failure was the metal connections. In the coming years, research and education in the field of fire safety will improve the position of timber as a structural material.

Ted Combs has been in the timber industry a long time and has recently brought distinction to the Association by being appointed to the Advisory Council of the California Forest Products Laboratory. The California Forest Products Laboratory, a facility of the University of California, is just getting its program under way in its new quarters in Richmond, California. This is a one-million dollar plant, well equipped for research, and its research will be directed toward California species.

Combs pointed out a recent instance in which building department officials, industry and structural engineers combined their efforts and knowledge in the interest of public safety. Los Angeles City building inspectors had noted instances of weakness in joist hangers. Ted Combs was called upon to enlist the aid of the manufacturers in arriving at a solution to this problem. Of concern was the torsion induced in joists by bowing or imperfections causing eccentric loads. Arrived at was the amount of torsion to be resisted by the end connection and how this was influenced by briding. The result of this study was a publication, "Recommended Standards for Joist Hangers and Similar Devices," which was published and adopted by the City of Los Angeles in January of this year.

Ben Benioff, another recognized authority on timber structures, moderated the program and also noted several points regarding utilization of timber which are not generally appreciated by the public. One of these is the fact that wood rated first in volume and second in tonnage of raw materials used for all types

(See page 34)

PLUMBING DEGREES ARE OFFERED BY COLLEGES

Two colleges of the nation are now offering degrees in plumbing. One is the State University of Iowa, and the other is Los Angeles City College. Some of the most difficult features of engineering, plant management and business administration are encountered by the plumbing contractor, and to cope with these conditions years of experience as an apprentice, journeyman and master plumber are required.

The requirements necessary to attain the designation of "master plumber" are the fundamental basis for the college degree and include mathematics, mechanical drawing, physics of liquids and gases, hydraulics, sanitation and piping systems. The course is five years and qualifies the student to take his journeyman's license.

CONVENTION HALL PLANNED

The Port of Oakland has approved construction of a new Convention Hall to be built in the Jack London Square area at an estimated cost of $250,000.

Architect Harry A. Bruno, 1440 Broadway, Oakland, is completing drawings for the Hall, which will be 1 story, concrete block, structural steel frame, metal roof deck, automatic sprinkler system, and will contain 100 x 200 ft. of area.

ENGINEERING SOCIETIES CENTER SITE PICKED

A Special Task Committee of Fifteen appointed to make recommendations for the site of the Engineering Societies Center to be established in the United States, recommended the Center be located in New York City, on 39th-40th Street, and "if rebuilding in that area proves impracticable, a comparable site should then be sought in midtown New York."

The report was submitted to the presidents of the American Society of Civil Engineers, American Institute of Mining, Metallurgical, and Petroleum Engineers, American Society of Mechanical Engineers, American Institute of Electrical Engineers, and the American Institute of Chemical Engineers.

Administration of the Center will be under supervision of The United Engineering Trustees, Inc.

ARCHITECT SELECTED

The Organizing Committee for the 8th Olympic Winter Games, which are scheduled to be held at Squaw Valley, Placer County, California, has commissioned the architectural firms of Kitchen & Hunt and Corlett & Spackman, San Francisco, to design the buildings which will be used in connection with the various activities and games.

CALIFORNIA HOME BUILDER TOURS

Earl W. Smith of El Cerrito, California, past president of the National Association of Home Builders, is among a group of American builders scheduled to visit Russia this summer.

The delegation of eighteen will make a 30-day tour of 13 cities in the Soviet Union, inspecting Russian housing and making a study of the materials and techniques used in Soviet construction.

"The visit offers the home building industry of America a unique opportunity to carry forward President Eisenhower's policy of stimolating the exchange of people and technical information between the United States and the Soviet Union," Smith declared. NAHB officials hoped the Soviet housing officials conducting the tour would make available the same free flow of information on their building materials and techniques as was provided to a delegation of Soviet builders recently touring the United States.

TUBERCULOSIS HOSPITAL ADD'N

Architect John I. Easterly, 1310 Lincoln street, Watsonville, is completing plans and specifications for construction of a 14-bed addition to the Santa Cruz County Hospital, providing additional facilities for the tuberculosis hospital.

The addition will be 1 story in height, with basement, and will be of Type 1, reinforced concrete construction. Estimated cost is $160,000.

NEWSPAPER BUILDING

Industrial Engineer W. D. Greschner, 1108 E. Washington, Santa Ana, has prepared plans and will build a precast concrete building at 625 N. Grand for the Santa Ana Register.

The building will be 140 x 160 ft.; concrete floor, plaster interior, basement, vault, stairways, rest rooms, steel rolling service doors, heating, ventilating, electrical, plumbing, ceramic tile, parquet, plywood mahogany panels, and a paved parking area providing space for 177 cars. Estimated cost of the project is $550,000.

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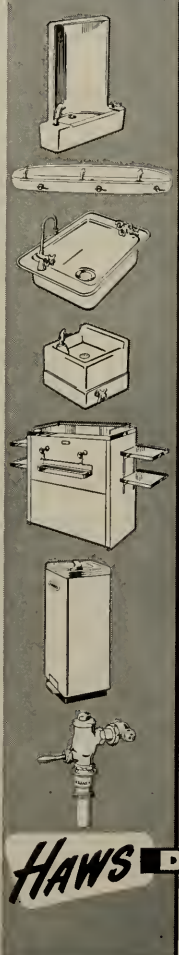

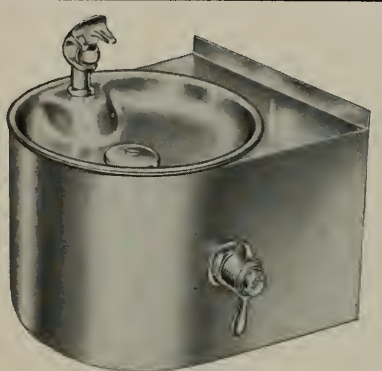

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ENGINEERS

(From page 32)

of naval construction afloat and ashore. More than 2,000 vessels and 43,000 small boats were made of wood during World War II. He stated that the industry employs more than two million people and produces materials valued at more than ten billion dollars annually. Although nearly 40 billion board feet are being cut annually, thanks to reforestation programs, new growth closely approximated this rate. Benioff noted that as a result of continued study in the various timber research laboratories, better utilization of wood and wood products will result. Recent improvements in glue-laminated and sandwich construction may be taken as an indication that there is still room from progress in this field, and there are still many challenging possibilities ahead.

MODULAR MEASURE AWARD WINNERS ANNOUNCED

The American Standards Association has named Leonard G. Haeger, Technical Director, Levitt & Sons, Inc., Levitown, Pa.; Fred M. Hauserman, President, The E. F. Hauserman Co., Cleveland, Ohio; and H. B. Zackrison, Chief, Engineering Department, U.S. Army Corps of Engineers, as the three men having done the most in the past year to encourage the use of Modular Measure in building.

C. W. KRAFT
Pres. Kraftile Co.

Presentation of the awards was made by C. W. Kraft, president of Kraftile Company, Niles, California, and himself winner of the ASA Modular Award in 1954, at the Annual Spring Luncheon of The Producers Council, held recently at the Los Angeles Biltmore Hotel.

"Modular Measure is a self-sustaining movement, with no high-pressure promotion behind it," said Mr. Kraft. "The individual efforts of enthusiastic builders, producers, contractors and architects are of immense importance in speeding the present trend to Modular dimensioning in building. Their work will accrue to the benefit of the American people in terms of lower building costs. The ASA Modular Measure award symbolizes the sponsors' appreciation of the essential contribution being made by individuals throughout the industry."

Modular Measure is a simple system of coordinating the designer's dimensions for a building with the actual unit sizes of the materials of which it is to be constructed. It does this by using the ASA 4-inch Module as a "least common denominator" when setting the dimensions of a building or when fixing the stock sizes of a building product, thus increasing construction efficiency and economy. Ultimate resultant savings in U.S. building costs have been estimated in the billions of dollars.

Selection of those to be recommended to the A.S.A. for this honor was made by a committee of representatives of the sponsors—the American Institute of Architects, The Producers' Council and the National Association of Home Builders (now being joined by the Associated General Contractors of America as the fourth co-sponsor of Modular Measure).

A. I. A. ACTIVITIES

(From page 29)

are considered in the best interest of the public and public works projects.

Considerable opposition to the proposal has developed and architects and engineers throughout the state are strongly supporting the measure.

JAMES J. CHIARELLI ELECTED PRESIDENT WASHINGTON A.I.A.

James J. Chiarelli, 201 Second & Cherry Bldg., Seattle, Washington, was elected president of The Washington State Chapter of The American Institute of Architects at the 61st Annual Meeting of the organization in Seattle on June 29th.

JAMES J. CHIARELLI
A.I.A. President

Born in Spokane, Chiarelli attended the School of Architecture at the University of Washington.

He is recipient of the Pan American Congress' Medalla de Oro for architectural design, and winner of Chapter Honor Awards in 1950 and 1953. He has served The Washington State Chapter as a board member and first vice-president previous to his election to the presidency.

The annual meeting was also occasion for the award of two architectural scholarships made available by the National Board of Fire Underwriters through cooperation with The American Architectural Founda-

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tion, Inc., and the A.I.A. NBFU representative Charles E. Landis presented Miss Ching-Hwa Hsio of Seattle a check for $533.00 for study in her fifth year in the University of Washington's School of Architecture, and a check for $1,600 to Hajime Kinoshita of Slocan City, B.C., for graduate study at M.I.T.

Other officers elected to serve with Chiarelli during the ensuing year included: Edwin Turner, Seattle, vice-president; Harold W. Hall, Everett, 2nd vice-president; John L. Rogers, secretary, and Albert O. Bumgardner, treasurer, both of Seattle. Arnold Gangnes, Seattle, Harrison Overturf, Seattle, and Lloyd J. Lovegren were named directors.

Chapter delegates to the Northwest Regional Council are Perry Johanson, B. Marcus Priteca, Lawrence Waldron, Ralf Decker, Leonard Bindon, John Morse, and Talbot Wegg. These members, together with Gayne L. Jones, will serve as delegates to the 1957 AIA Annual Convention in Washington, D.C.

SANTA CLARA & SANTA CRUZ CHAPTER

A recent meeting was devoted to a discussion and consideration of Senate Constitutional Amendment No. 6, which will be submitted to voters of the State of California at the general election in November.

Members of the State Legislature, representing Santa Clara and Santa Cruz Counties were in attendance and discussed many important phases of the proposed legislation.

VILLA - GARDEN HOTEL

(From page 26)

the job site on special carriers made for this purpose and hoisted into place as finished walls ready for paint with all door openings, window openings, electrical outlets, chases for mechanical work and recesses for bathroom accessories completely incorporated in the panels. This method saved many dollars and countless man hours over ordinary poured-in-place concrete construction and produced a far better and more uniformly controlled product.

B. L. Nishkian, Structural Engineer; F. L. Nemec and W. S. Sinrock, Mechanical Engineers; Bill F. Jones, Electrical Engineer, and Pacific Development Company, General Contractors.

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LIFT SLAB DESIGN

(From page 25)

or by empirical co-efficients has been retained however, and the total moment for which provision is to be made has been increased slightly. The new code contemplates ratios of live to dead load up to ten with a stress increase of no more than 1/3 for condition of maximum unbalanced loading. Numerous other improvements have been made in the proposed revision including recommendations for minimum column sections as well as column moments; for a more rational minimum slab thickness requirement and a more detailed treatment of moment coefficients together with detailed recommendations for lengths of positive and negative reinforcement.

Charles A. McMahon, well known Project Superintendent responsible for millions of dollars of construction in the area, brought his field experience to bear on the problem. Basic economy of the system starts with a great saving in forming cast, say 35 cents per square foot for the bottom of a slab as compared to 85 cents for the sides of a beam in other types of construction. In addition the depth of flat slabs often allows the placement of conduit within the slab, thus saving expensive floor fills over thinner slabs often used in other floor framing systems to accomplish this purpose.

Deflections in the magnitude of 1/8 to 1/4 of an inch are common for both beam and girder, and flat slab construction at the end of three months time, but the effect of plastic flow is more pronounced in the latter system. This effect of plastic flow is particularly noticeable in the thin slabs on long spans which often result with light office loadings.

Slab deformation is greatly influenced by the length of time shoring is left in place after the concrete pour is made. It is possible and practicable to design formwork much of which may be stripped out while still leaving key shores in place for longer periods of time. By thus leaving additional shoring in place until after the concrete has reached an ultimate strength of 2500 to 3000 P.S.I., the effect of stripping on ultimate deflection may be greatly reduced. This method is not too expensive, and is preferable to the generally unsatisfactory practice of reshoring.

Cambering of formwork is possible, but gives rise to problems in screeding the top of the slab. Much care must be taken to prevent the formation of shallow pockets in the middle of the slab. When determining the cambering it must be remembered that the construction shoring itself may settle from 1/4 to 1/2 of an inch under the load of fresh concrete.

Spacing of reinforcing steel within column strips

may be achieved without appreciably greater cost by use of templates. However, it should be noted that increasing the overall slab thickness slightly may often be desirable if a number of conditions requiring special labor may be simultaneously eliminated.

The interchange of ideas contributed by the panel and by discussion from the floor did much to clarify and pinpoint the problems inherent in this type of construction, and is particularly welcome in this era where so much effort is being made to effect true economy in construction.

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DESMONDS

(From page 11)

way on the south side of the building. Both stairways were prominently located for ease of shopping, but without restricting visibility, and were especially designed for comfort, each step being a mere six-inch lift. The split level and stairway treatment was designed to be pleasing to the customer and to create an informal, intriguing use of space. In addition, the use of the broken level resulted in appreciable savings in construction costs.

Departmentally, we designed the store with Furnishings in the front center, Women's Department to one side of the street floor level, Clothing on the lower level and the Boy's Shop on the mezzanine.

We felt the Women's Department should be distinctively informal and feminine. Murals depicting scenes of early Pasadena life add a note of gaiety; the carpets and lighting are highly feminine and in keeping with the merchandise. Louvered display screens are used here to give added attention value to displays.

Throughout the store, we provided for maximum self-service and shopper convenience by the use of open cases and fixtures wherever practicable.

Because Desmond's serves its retail stores from a central warehouse, we provided only receiving and temporary storage facilities, thus adding to the total floor area used for selling.

Architectural design to fit the location, interior design for specific merchandising requirements, plus functional provision for the individual operation are the keynotes of a successful retail store building. In examining and providing for each requirement in the design of Desmond's Pasadena store, we evaluated each in its relation to the ultimate goal . . . a successful blending of architecture with merchandising.

PHOTO CREDITS: Kaiser Services, Cover, Pages 17, 18 (bottom), 19; Julius Shulman, Page 10, 11; Wm. Corlett, AIA, Pages 12, 14; Phil Palmer Photo, Pages 13, 15, 16; Russell Illig, Pages 20, 21; Larry Harmon Photo, Pages 22, 23; Albert C. Martin & Associates, Page 24; Robert M. Sherman, Designer, Page 26; Westlake Studio, Page 27; Michel & Pfeffer Iron Works, Inc., Page 27.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

TESTS AND PROPERTIES OF CONCRETE AND CONCRETE AGGREGATES. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Price $6.

Represents an excellent series of papers by many leading authorities on the subject of concrete. Numerous innovations in concrete technology and testing are well covered; material contained in previous editions has been carefully revised and expanded to bring it up to date.

Subject matter has been divided into four principal groups: Part I, including sampling, statistical consideration, evaluation, and needed research; Part II, includes tests and properties of freshly mixed concrete, hardened concrete, and special categories including ready mix and light weight concrete and aggregates; Part III, deals with tests and properties of concrete aggregates; and Part IV, deals with tests and properties of other materials—water, curing materials, air entraining admixtures and mineral admixtures.

The book is an excellent text or text supplement for students use and an important reference for testing engineers and laboratory technicians.

STEELS FOR THE USER. By R. T. Rolfe, O.B.E., F.R.I.C., F.I.M. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $10.00.

This is the Third Edition, revised and enlarged, and is highly practical based upon long experience of the metallurgical industry. Its aim is to bridge the gap between science and practice for carbon steels in industry. The scientific aspects of the various processes are comprehensively treated, but these are always illustrated by ample data and examples from actual service.

That this work has achieved its purpose is evident by the need for this third and enlarged edition, which has been brought up to date and completely revised throughout. It is a book of inestimable value to the practical man, who can benefit from the experience of others.

1955 BOOK OF ASTM STANDARDS: PART I—Ferrous Metals. American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. Price $13.50.

Part I, contains 1834 page and 315 standards, and 11% larger than the 1952 edition and contains 125 standards that are new or have been revised since the 1954 Supplement was published.

Contains standard and tentative specifications, methods of test, and definitions for steel piping materials; flat products; bars, bolts, and rivets; billets, forgings, and axles; rails and accessories; railroad wheels; springs; concrete reinforcement; corrosion resisting steel; metallic coatings for steels; welded rods; wrought iron; cast iron; malleable iron; magnetic materials; ferro alloys; and metal powders; as well as general methods of testing.

It is especially important in the heavy machinery, railroad and construction industries. Materials engineers, purchasing agents and others concerned will need the new Part I to enable them to use the latest applicable standards.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Aluminum enclosed floodlights. New catalog section describes uses, versatile mountings, construction, charts, drawings, specifications. Write for copy DEPT-A&E, Steber Mfg. Co., Broadview, Ill.

Centrifugal pumps. New 8-page bulletin describes double suction single stage centrifugal pumps where liquids of low viscosity are to be moved; describes manufacture, maintenance; cross section drawings, construction details for standard sizes up to 10" discharge. Write DEPT-A&E, C. H. Wheeler Mfg. Co., 19th & Lehigh, Philadelphia 32, Pa.

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Solar heat and light control. New 6-page brochure (AIA File 35-P) describes the three major advantages of jalousies; to lower air conditioning costs, improve visual environments, and enhance exterior designs; construction details; photographs show both vertical and horizontal types on new buildings and modernization projects, suggests interesting possibilities for use. Free copy write DEPT-A&E, Lemlar Mfg. Co., P. O. Box 352, Gardena. Calif.

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Effective seal for corrugated materials. Over 70 different, weather tight, strip material types designed to fit the needs of various sheets and panels of metal, asbestos and plastic sheeting in use in the building industry today, are described in this new booklet (A.I.A. FILE No. 12H & 12F); shows application in use for irregular shapes of corrugated, v-beam, and ribbed roofing, siding and panels; molded precisely to fit the openings between panel and structural members. Free copy write DEPT-A&E, PERM-SEAL, Asphalt Coprn of America, Danville, Ill.

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Steel section electronic garage doors. New brochure with many colored illustrations of typical installations; residential and industrial; sectional upward acting over-head doors; description of installation, features, specifications on Morrison Roly-Door. Free copy write DEPT-A&E, Roly-Door Sales Company of San Francisco, 5976 Mission Street, San Francisco.

Doors for special services. New 1956 Catalog (A.I.A. FILE No. 12P) gives data on new advanced line of BILCO's roof scuttles, ceiling access doors, interior and exterior doors and basement doors; describes advantages and features, illustrates installations, specifications chart, gives materials, weights, and prices; also list of BILCO Representatives in your area to serve you. Write for free copy and list Dept-A&E, The BILCO COMPANY, New Haven 5, Conn.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—
Cleer Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored gleze edd ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Siselkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dempcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

BUILDING HARDWARE—

Sash cord com. No. 7 ..... $2.65 per 100 ft.
Sash cord com. No. 8 ..... 3.00 per 100 ft.
Sash cord spot No. 7 ..... 3.65 per 100 ft.
Sash cord spot No. 8 ..... 4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.
1-Ton lots, per 100 lbs. $3.75
Less than 1-ton lots, per 100 lbs. 4.75

Nails, per keg, base $10.55
8-in. spikes 12.45
Rim Knob lock sets $1.80
Butts, dull bress plated on steel, 3½x3½ ..... .76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%
Trinity White, Meduse White, Calaveras White ..... 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Meduse Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosel concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches). Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	25/32x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—
25/32 x 2¼ First Grade $390.00
25/32 x 2¼ 2nd Grade 365.00
25/32 x 2¼ 2nd & Btr. Grade 375.00
25/32 x 2¼ 3rd Grade 240.00
25/32 x 3¼ 3rd & Btr. Jtd. EM 380.00
25/32 x 3½ 2nd & Btr. Jtd. EM 390.00
33/32 x 2¼ First Grade 400.00
33/32 x 2¼ 2nd Grade 360.00
33/32 x 2¼ 3rd Grade 320.00
Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass ..... $ .30 per □ ft.
Double Strength Window Glass ..... .45 per □ ft.
Plate Glass, ¼ polished to 75 ..... 1.60 per □ ft.
75 to 100 ..... 1.74 per □ ft.
¼ in. Polished Wire Plate Glass ..... 2.50 per □ ft.
¼ in. Rgh. Wire Glass ..... .80 per □ ft.
⅛ in. Obscure Glass ..... .44 per □ ft.
25/32 in. Obscure Glass ..... .63 per □ ft.
⅛ in. Heat Absorbing Obscura ..... .54 per □ ft.
25/32 in. Heat Abarbing Wire ..... .72 per □ ft.
⅛ in. Ribbed ..... .44 per □ ft.
25/32 in. Ribbed ..... .63 per □ ft.
⅛ in. Rough ..... .44 per □ ft.
25/32 in. Rough ..... .63 per □ ft.
Glazing of above additional $.15 to ..... .30 per □ ft.
Glass Blocks, set in place ..... 3.50 per □ ft.

HEATING—

Furnaces—Gas Fired
Floor Furnace, 25,000 BTU ..... $ 70.50
35,000 BTU 77.00
45,000 BTU 90.50
Automatic Control, Add 39.00
Dual Wall Furnaces, 25,000 BTU 91.50
35,000 BTU 99.00
45,000 BTU 117.00
With Automatic Control, Add 39.00
Unit Heaters, 50,000 BTU 202.00
Gravity Furnace, 65,000 BTU 198.00
Forced Air Furnace, 75,000 BTU 313.50
Water Heaters—5-year guarantee
With Thermostat Control,
20 gal. capacity 87.50
30 gal. capacity 103.95
40 gal. capacity 120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅝") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry	185.00

8 to 24 ft.

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-5IS $135.00
½-inch, 4.0x8.0-5IS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resewn, per square. $15.25
¾" to 1¼" x 24/26 in split resewn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Raw	Wholesale Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
½"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, eccording to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd
Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile
5cored ..... F.O.B. S. F.
12 x 12, each ..... $ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x 7/8-inch, plain	$ .28	$ .253
6 x 12 x 1/2-inch, plain	.295	.265
6 x 6 x 7/8-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00
Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

XPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and ddresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch r district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or presentative, may be found.

)HESIVES (1)
ll and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

R CONDITIONING (2)
r Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

RCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co.,
924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co.,
625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co.,
109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co.,
300 S. 12th, Phoenix 4-5503
Tucson. Laing-Garrett Co.,
19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

RCHITECTURAL VENEER (3)
ramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., DL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

orcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

anite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

arble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

ANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

ATHROOM FIXTURES (5)
letal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.

PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DECKS—ROOF (11a)
UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)
THE BILCO COMPANY
New Haven, Conn.

Electric Doors
ROLY-DOOR SALES CO.
San Francisco, 5976 Mission St., PL 5-5089

Folding Doors
WALTER D. BATES & ASSOCIATES
San Francisco, 693 Mission St., GA 1-6971

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2060
Seattle: Securities Bldg., SE 5028
Spokane: Realty Bldg., MAdison 6175
San Diego: 514 Spreckels Bldg., BElmont 4-6082
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)
KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., POrtsmouth 7-6760

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

ROOF TRUSSES (30a)
EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (31)
GLADDING, McBEAN & CO. *(3)

SHADES (31a)
SHADES, Inc.

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reparted as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diago	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diago	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	11½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%PROM				

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table 1.

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

JR. HIGH SCHOOL, Petaluma, Sonoma county. Petaluma School District, Petaluma, owner. Frame and stucco, some structural steel construction; to provide facilities for administration, 3-classroom wings, multi-purpose rooms, kitchen, gymnasium, locker rooms, shops, and toilet rooms — $1,210,000. ARCHITECT: Robert Stanton, Fred Keeble & George Rhoda, Carmel. GENERAL CONTRACTOR: Rubino & Gulickson, 41 So. Wilson Way, Stockton.

COURT & ADM'N. Bakersfield, Kern county. Board of Supervisors, County of Kern, Bakersfield, owner. 7-Story, structural steel and concrete, terrazzo, insulation, elevators, metal sash, movable partitions, acoustical tile, asphalt tile floors, air conditioning — $4,530,000. ARCHITECT: Ernest L. McCoy, 2811 H St., Bakersfield. GENERAL CONTRACTOR: Guy E. Hall, 310 30th St., Bakersfield.

TRANSIENT HOTEL, Beverly Hills, Los Angeles county. H. S. Scott, Los Angeles, owner. 2-Story transient hotel, composition roofing, dome skylights, louver windows, sliding doors, pipe columns, plywood and carpeted floors on second level, stall showers with ceramic tile wainscoting, electric heaters, managers living quarters, lobby terrazzo floors, carport, swimming pool; 10,000 sq ft. area. ENGINEER: William G. Chandler, 7411 Beverly Blvd., Los Angeles. GENERAL CONTRACTOR: H. S. Scott, 8540 Holloway Dr., Los Angeles.

STORE BLDG., Santa Rosa, Sonoma county. Sears, Roebuck Co., Los Angeles, owner. Work will comprise remodel of the present store building at 455 B Street—$65,634. ARCHITECT: Reynolds & Chamberlain, 3833 Piedmont Ave., Oakland. GENERAL CONTRACTOR: Paul V. Wright, 1826 Morley Way, Santa Rosa.

VALLEY NATIONAL BANK, Phoenix, Arizona. Valley National Bank, Phoenix, owner. 1-Story masonry construction, built-up roof, asphalt tile, gas-fired heating, air conditioning, plaster, plate glass, vault doors, terrazzo, steel roof trusses, 131x145 ft. — $362,256. ARCHITECT: Weaver and Drover, 128 E. Camelback Rd., Phoenix. GENERAL CONTRACTOR: Womack Const'n Co., 2020 W. Campbell Ave., Phoenix.

SHOWER & LOCKER ROOM, Junior College, San Pablo, Contra Costa county. Contra Costa Junior College, Martinez, owner. Frame and stucco construction — $181,900. ARHITECT: Donald L. Hardison, 225 Broadway, Richmond. GENERAL CONTRACTOR: F. P. Lathrop, 806 Hearst Ave., Berkeley.

MUSIC - ARTS - HOME ECONOMICS, Humbolt State College at Arcata, Humboldt county. State of California, Division of Architecture, Sacramento, owner. 2-Buildings; wood frame 1-story Music building, 8195 sq. ft. floor area: Home-Economics building, 2-story, concrete, wood-siding, metal sash, wood roof and composition roofing, plaster, acoustical tile, cabinet work, floor coverings, auditorium chairs, wood doors, metal doors, aluminum entrance doors, electrical, mechanical — $485,000. ARCHITECT: State of California, Division of Architecture, Sacramento. GENERAL CONTRACTOR: Glover Constn Co., P. O. Box 913, Santa Rosa.

CONVENT BLDG., Hanford, Kings county. Sacred Heart Hospital, Hanford, owner. 1-Story frame and stucco, steel sash, asbestos shingle roof — $72,000. ARCHITECT: Buckley & Houwelling, 166 Geary Street, San Francisco. GENERAL CONTRACTOR: Arden Hutchings, 1492 N. McKee Rd., Merced.

HOSPITAL, Van Nuys, Los Angeles county. Valley Presbyterian Hospital, Van Nuys, owner. 3-Story and basement. 63-bed, poured concrete, steel and concrete roof, elevators, plumbing, electrical, individually controlled plastic sun-control louvers, unit air conditioning, floor to ceiling windows, landscaping, asphalt paved parking area, 27,785 sq. ft. floor area —$1,100,000. ARCHITECT: Pereira & Luckman, 9220 Sunset Blvd., Los Angeles. GENERAL CONTRACTOR: Steed Bros, P. O. Box 350, Alhambra.

CHURCH, San Francisco. Community Church of the Brethren, San Francisco, owner. 2-Story new Church building—1st story, reinforced concrete block walls; 2nd story, frame and stucco; some brick. ARCHITECT: George N. Hilburn, 712

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17th Street, Modesto. GENERAL CONTRACTOR: Joel Johnson & Son, 1585 Church Street, San Francisco.

MEDICO-DENTAL BLDG., Los Gatos, Santa Clara county. Drs. Ness & Beque, owners. 1-Story concrete block and frame, tile roof, steel sash, vinyl and linoleum floors, 5,200 sq. ft. area — $77,300. ARCHITECT: Gifford E. Sobey, 123 W. Main Street, Los Gatos. GENERAL CONTRACTOR: A. A. Rogers, South, San Jose-Los Gatos Rd., Los Gatos.

BAKERY, Stockton, San Joaquin county. Graven-Inglis Sunbeam Bakers, Inc., Stockton, owner. 1-Story, reinforced concrete tiltup construction, wood laminated beams, wood roof, steel and aluminum sash, stone veneer, air conditioning in offices, 96,000 sq. ft. area — $500,000. ARCHITECT: Donnell E. Jaekle & Donald French, 586 N. 1st Street, San Jose. GENERAL CONTRACTOR: Craft Const'n Co., 2812 Sanguinetti Lane, Stockton.

GREAT WEST ELEMENTARY SCHOOL, Reedley, Fresno county. Great West Elementary Union School District, Reedley, owner. Frame and stucco construction; multi-purpose, kitchen, covered passageways — $110,095. ARCHITECT: Horn & Mortland, 2016 Merced Street, Fresno. GENERAL CONTRACTOR: R. G. Fisher, P. O. Box 4081, Fresno.

REDWOOD ELEMENTARY SCHOOL, Fort Dick, Del Norte county. Redwood Union Elementary School District, Fort Dick, owner. Frame and stucco construction; 6-classrooms, toilet rooms — $148,000. ARCHITECT: Robert J. Keeney, Fluhrer Bldg., Medford, Oregon. GENERAL CONTRACTOR: H. Barnhart, P. O. Box 68, Medford, Oregon.

WAREHOUSE, Long Beach, Los Angeles county. Cree Investment Co., Long Beach, owner. Tilt-up concrete wall construction, structural steel, built-up composition roof, slab floor, metal sash, stone work, electrical work, 128x128 ft. ENGINEER: John P. Jamison & Associates, 11750 S. Alameda Ave., Lynwood. GENERAL CONTRACTOR: Hanson Const'n Co., 11750 S. Alameda Ave., Lynwood.

COUNTY HOSPITAL ADD'N., Salinas, Monterey county. Board of Supervisors of Monterey County, Salinas, owner. Work comprises addition of 115-bed and surgery facilities to the County Hospital in Salinas — $938,700. ARCHITECT: Jerome Kasavan, 7 Winham Street, Salinas. CONSULTING ARCHITECT: Stone, Mulloy, Marraccini & Patterson, 619 California St., San Francisco. GENERAL CONTRACTOR: Harold C. Geyer, P. O. Box 1190, Monterey.

PAPER CONTAINER PLANT, San Jose, Santa Clara county. International Paper Co., 220 E. 42nd, New York, owner. 1-Story reinforced concrete tilt-up construction, steel sash, rolling doors, air conditioning, bridge crane, lunch room, terrazzo floors; 155,000 sq. ft. area — $800,000. CONSULTING ENGINEER: David E. Edwards, 591 Pine, Maywood. GENERAL CONTRACTOR: E. A. Hathaway Co., 5th & Keyes, San Jose.

SANCTUARY, Temple City, Los Angeles county. Community Methodist Church, Temple City, owner. Reinforced masonry and concrete Sanctuary, seating capacity 474, composition rock roof, laminated wood trusses, interior plaster, hardwood paneling, cork and terrazzo floors, insulation, steel sash, glass doors, mosaic work, basement, balcony, radiant and forced air heating, asphaltic concrete paving; 8600 sq. ft. area. ARCHITECT: Culver Heaton, 259 S. Los Robles Ave., Pasadena. GENERAL CONTRACTOR: Frank Legg, 136 Anita Drive, Pasadena.

HIGH SCHOOL ADD'N., Sir Francis Drake, San Anselmo, Marin county. Tamalpias Union High School District, Mill Valley, owner. Work includes addition to present building and new Drama and Music building: Classroom addition includes classrooms, science, arts — $145,000. Drama and Music bldg. structural steel frame and frame and stucco—$167,333. STRUCTURAL ENGINEER: H. M. Engle, 1539B 4th St., San Rafael. ARCHITECT: Gromme, Mulvin & Priestly, 1593A 4th St., San Rafael. GENERAL CONTRACTOR: Henderson Constn Co., 33 Ritch St., San Francisco (Classroom); Midstate Constn Co., 347 Clay St., San Francisco (Drama and Music Bldg.)

DRIVE-IN RESTAURANT, Walnut Creek, Contra Costa county. Mel's Drive-In, San Francisco, owner. 1-Story concrete block and structural steel frame, plate glass, wood roof with composition roofing — $86,207. ARCHITECT: Marion Gaidano, 605 Washington St., San Francisco. GENERAL CONTRACTOR: Romley Constn Co., 2559 Danville Highway, Walnut Creek.

NURSING HOME, Bakersfield, Kern county. Mercy Hospital, Bakersfield, owner. 1-Story, Type 1, reinforced concrete, metal stud, metal lath, plaster, aluminum windows and doors, vinyl tile floors; 16,000 sq. ft. floor area; facilities for 50-beds — $503,000. ARCHITECT: Frank Trabucco, Architect & Lewis Hurlburt, 355 Stockton St., San Francisco.

RECREATION BLDG., Cressey Park, Compton, Los Angeles county. Compton City Council, Compton, owner. Reinforced brick and precast panel construction; kitchen, craftrooms, rear hall, stage, toilet rooms; composition roofing, terrazzo and wood floors, insulation, exposed beams, aluminum sash, sliding metal and glass doors, stainless steel kitchen counters, ceramic tile, heating and ventilating; 9000 sq. ft. area — $112,195. ARCHITECT: Marion J. Varner, 35 N. Raymond Ave., Pasadena. GENERAL CONTRACTOR: Julian Constn Co., 1107 E. Kay, Compton.

GRAND LODGE BLDG., San Francisco. Sons of Italy in America, San Francisco, owner, 1-Story and part two-story, basement, reinforced concrete and structural steel frame: 80x80 ft. — $236,800. ARCHITECT: Clarence O. Peterson, 116 New Montgomery St., San Francisco. GENERAL CONTRACTOR: M & K Corp., 405 Montgomery St., San Francisco.

MEDICAL BLDG., Wilmington, Los Angeles county. Dr. Johnson, Wilmington, owner. Frame and stucco, wood siding, medical office building, tile shingle roof, concrete slab and vinyl tile, plaster interior, acoustical tile, air conditioning, colored plumbing fixtures, ceramic tile, copper piping, natural finish hardwood case work, linoleum counter top, garage, blacktop paving; 2216 sq. ft. area. ARCHITECT: Kenneth S. Wing, 30 Linden Ave., Long Beach. GENERAL CONTRACTOR: William J. O'Brien, 843 Newport Ave., Long Beach.

DOYLE COLONY SCHOOL, Porterville, Tulare county. Porterville Elementary School District, Porterville, owner. Work comprises addition to the present school facilities including 2-classrooms, multi-purpose rooms, kindergarten—$84,877. ARCHITECT: Stuhr & Hicks, 924 Truxton Street, Bakersfield. GENERAL CONTRACTOR: Riel & Terry, 1608 Crestmont, Bakersfield.

ST. HELENS SCHOOL, Fresno. St. Helens School, Fresno, owner. Work comprises construction of new facilities — $64,464. ARCHITECT: Swartz & Hyberg, Rowell Bldg., Fresno. GENERAL CONTRACTOR: Long & Needham, P. O. Box 1623, Fresno.

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IN THE NEWS

CEDARS OF LEBANON HOSPITAL EXPANDS

Work has commenced on an addition to the Cedars of Lebanon Hospital, Los Angeles, which will provide facilities for an enlarged X-ray department and department of diagnostic radiology, according to George M. Thompson, president of the hospital.

Cost of the project will approximate $500,000. Pereira & Luckman, Los Angeles, are the architects.

SUPER-MARKET FOR PALO ALTO

The architectural firm of Jones & Emmons, 12248 Santa Monica Blvd., Los Angeles, is completing drawings for construction of a new Super-Market building to be built in Palo Alto for J. L. Eichler & Sons.

The new building will be of 1 story, concrete block and frame construction; air conditioning, and will contain 15,000 sq. ft. of floor area.

CROWN ZELLERBACH PLANS SAN FRANCISCO BUILDING

The architectural firm of Skidmore, Owings & Merrill, 1 Montgomery Street, San Francisco, is preparing plans and specifications for construction of a 22-story modern office building to be built in the block bounded by Market, Bush, and Battery streets, San Francisco, for the Crown Zellerbach Corporation.

In addition to being 22 stories in height the new building will have two floors of basement garage facilities for parking 200 automobiles; structural steel frame and reinforced concrete construction; air conditioning, glass, aluminum sash; 9 elevators; landscaped gardens; 20,000 sq. ft.

H. J. Brunnier, Sharon Bldg., San Francisco, is the Structural Engineer for the project, which it is estimated will cost several million dollars.

KRAFTILE PATIO TILE IN JAPANESE SETTING

A charming 100 per cent Japanese garden house, with Tatami mats, Shoji screens and Noguchi lamp, prefabricated in Japan, was recently erected as an exhibit of the Japan Trade Center in San Francisco.

The one major exception of use of oriental materials in the house is the neat, squared-off pattern and rich tile-red color Kraftile patio tile. Kraftile's products blend equally well with Occidental or California contemporary, and ranch-style architecture and are fast becoming Western America's most popular outdoor floor, interior floor, walks, lanais, hearths, stairs, and entries.

HOSPITAL REMODEL

Architect John I. Easterly, 1310 Lincoln St., Watsonville, is completing drawings for construction of new laboratories to be built in remodeling the interior of the Watsonville Community Hospital at Watsonville.

ARCHITECT SELECTED

The Board of Supervisors of Shasta County has commissioned the architectural firm of Smart & Claybaugh, 2125 S. East

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Built-in telephone outlets are a must in today's homes

says ARTHUR K. EHRLICH, Arthur K. Ehrlich & Associates, Burbank, Calif. Builders, *Better Homes & Gardens* Idea Home for 1955 in Glendale, Calif. (pictured below)

"We wouldn't dream of building a home without concealed wiring and telephone outlets in the original plans. It's the kind of detail that sets the well-built home above the average. It just has to be there." Telephone outlets in rooms that are used most add much to the value of Ehrlich homes.

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Street, Redding, to design a new County Administration Building to be built on Placer Street in Redding at an estimated cost of $220,000.

The new building will be 2 stories in height and of reinforced concrete and steel construction.

NEW HIGH SCHOOL

The architectural firm of Gromme, Mulvin & Priestly, 1539A, 4th Street, San Rafael, is preparing plans for construction of a new High School in Larkspur-Corte Madera for the Tamalpais Union High School District.

The new school plant will provide facilities for 1,000 students and will cost an estimated $2,300,000.

The firm of Ferris & Erskine, 777 La Rue Street, Reno, Nevada, is the Consulting Architect for the project which will include frame and stucco construction.

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SOUTH GATE MEDICAL BUILDING PLANNED

The architectural firm of Roy L. Kiter & Associates, 3321 Tweedy Blvd., South Gate, is preparing drawings and specifications for construction of a 1-story, 8-room frame, stucco and stone veneer medical building to be built in South Gate for Dr. Joseph Desimoner.

The building will contain 1180 sq. ft. of area: composition and rock roofing, aluminum sash, concrete slab floors with asphalt tile covering, acoustical ceilings, air conditioning, laminated plastic counter tops, plumbing and electrical work.

ANNOUNCES NEW CONCRETE DRILL

A new concrete hole saw, operated by either electric or gasoline power, that will drill round holes from 1" to 6" in diameter, through reinforced concrete, has just been announced. The diamond-faced core drills and a feed mechanism that keeps constant pressure on the bit give the unit a cutting speed averaging 1" per minute.

The machine weighs only 150 lbs complete and is mounted on small wheels for easy positioning over the hole location, operates on 110 or 220 v. and has a tap to supply water through a hose. Distributed by the J. F. Hamlin Co., Inc., San Francisco.

M. C. HAM NAMED NEW COAST SALES MANAGER

Marshall C. Ham of Minneapolis has been appointed "Area VIII" sales manager for the Baeber-Greene Company of Aurora, Ill. The area covers the states of Arizona, California, Oregon, Washington, Utah, Nevada and Idaho, and offices are maintained in San Mateo, California.

Ham succeeds E. L. Benson, who has been appointed to the new post of District Manager, Conveyor Sales for California and Nevada.

MULTIPLE WALL MOUNTED DRINKING FOUNTAIN

An entirely new concept in multiple wall-mounted drinking fountains has been introduced by the Haws Drinking Faucet Company of Berkeley, California. This lightweight fiberglas model was designed by Channing Wallace Gibson in beautiful flowing contour lines that enhance practically any style of architecture.

Of reinforced fiberglas plastic, it is available in five decorative colors in addition to white: Cerulean, Pistachio, Coral Accent, Yellow Mist, and Grey Satin. This new model is extremely light in weight, yet has unbelievably high strength properties; installation is simple, no heavy wall mounting brackets necessary; includes all of the Haws sanitation features, and all exposed fixtures are polished chrome plated brass. Ideal for any situation where multiple drinking facilities are required.

VETERANS MEMORIAL BUILDING PLANNED

Architect C. A. Caulkins, Jr., Rosenberg Bldg., Santa Rosa, is completing drawings for the construction of a 1-story frame and stucco Veterans Memorial Building in Sebastopol for the Board of Supervisors of Sonoma County. Estimated cost is $250,000.

CALIFORNIA INFLUENCE ON STORE DESIGN TOLD

The California "look" in retail store architecture was discussed at the recent Harvard Workshop by Gene Burke, partner in the architectural firm of Burke, Kober & Nicolais, Harold J. Nicolais, architect, Los Angeles.

The Cambridge, Mass. conference on store design was part of the annual meeting of store executives held at Harvard

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University School of Business which is sponsored by the National Retail Dry Goods Association.

Describing the gaining momentum of the "Southern California Look," Burke declared "Retail management in all sections of the United States is becoming increasingly conscious of the practical advantages of the contemporary style of store architecture which originated in the Los Angeles area."

ELKS CLUB AND STORE

Architects Fingado & Kern of Oakland are completing working drawings for construction of a 2-story concrete block and frame Elks Club and store building to be built in Crescent City for the B.P.O. Elks, No. 1689 Hall Association of Crescent City.

The work will include 11,000 sq. ft. of floor area.

SPORTS ARENA

Architects Stiles and Robert Clements of Los Angeles are completing working drawings for construction of a sports arena at Exposition Park in Los Angeles for the Coliseum Commission.

The building will be 420 x 384 ft.; 3-hinge type steel trusses, with truss purlins, connecting down to steel base arches; aluminum roofing, acoustical ceilings, acoustical end walls; 250 x 90 ft. playing floor; 85 x 200 ft. refrigerated ice rink; large concession area, 140,000 sq. ft. trade show area, fully air conditioned, 30 ft. side entrance tunnel, glass entrance doors set in aluminum.

Separate contract consideration for upholstered opera type seats at estimated cost of $500,000.

SECURITY TITLE CO. BUILDS IN SAN DIEGO

Architect Raymond R. Shaw, AIA, 649 South Olive Street, Los Angeles, is designing and will supervise construction of a new office building to be built in the City of San Diego by the Security Title Insurance Company.

The proposed building will occupy an area encompassing 100 feet square, remainder of the property 100 feet by 200 feet will be developed into a parking lot with a capacity of approximately 30,000 sq. ft. Construction will be of reinforced concrete, exterior finish a combination of black marble or granite and architectural concrete. Interior finish will include acoustical ceilings; rubber tile, asphalt tile and terrazzo floors; fluorescent lighting; passenger elevator; electric dumb waiters; complete air conditioning; mahogany or walnut trade fixtures. The estimated cost of the project is $500,000.

SHOPPING CENTER SITE PURCHASED

Architect Paul Hammarberg, 2941 Telegraph Avenue, Berkeley, is preparing drawings and specifications for construction of a Super Market and group of stores to be built on a 30-acre site purchased by the Albert-Lovett Company at San Pablo Avenue and Fairmont Avenue in El Cerrito.

ARTHUR O. WILLIAMS JOINS PEERLESS

Arthur O. Williams has joined the staff of the Peerless Electric Company, San Francisco, according to a recent announcement by Samuel B. Herst, president of the firm.

Williams is well versed in problems of lighting with incandescent and fluorescent fixtures and modern trends in illumination, lighting installation procedures and the economics of correct lighting practices.

WASHOE MEDICAL CENTER ADD'N

The architectural firm of Vhay & Grown, 131 W. 2nd Street, Reno, Nevada, is completing plans and specifications for construction of a surgical, diagnostic and treatment building-addition to the Washoe Medical Center, Mill and Kirman Avenue, Reno.

The addition will be 2 stories in height and will contain 21,000 sq. ft. of floor area.

MEDICAL BUILDING

Architect Edw. D. Cerruit, 1440 Broadway, Oakland, is working on drawings for construction of a 14-suite pharmacy, X-ray and laboratory building to be built in Orinda.

The new facilities will occupy a 2-story frame and stucco construction, 11,000 sq. ft. building.

ENGINEER SELECTED

The engineering firm of Headman, Ferguson & Carollo, 2168 Shattuck Avenue, Berkeley, has been commissioned by the Board of Regents of the University of California, to design and prepare specifications for alterations and rehabilitation of the Life Science Building on the University of California Campus at Berkeley.

ARCHITECTS FOR NEW COURTS BLDG.

The architectural firm of Weihe, Frick & Kruze, 414 Mason Street, San Fran-

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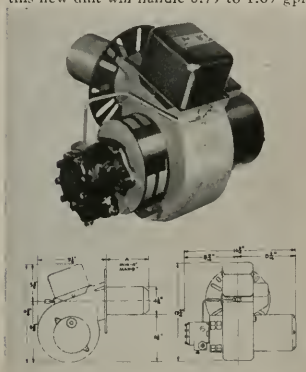
cisco, has been commissioned by the Department of Public Works for the City and County of San Francisco to draft plans and specifications for construction of a new Hall of Justice building which will contain facilities for the police department and Courts.

Charles W. Griffiths, City Architect for San Francisco, will also serve in connection with the project, which is one of the largest new governmental buildings to be built in San Francisco for many years.

The new facilities will be located at a site at 7th and Bryant, and the estimated cost of the work is $15,000,000.

NEW SPECIAL OIL BURNER

Sundstrand Engineering Company of Rockford, Ill., announces the development of a new oil burner especially designed for original equipment manufacturers. Ruggedly constructed with a 1-piece, high grade, cast aluminum housing, this new unit will handle 0.75 to 1.65 gph.



It is available in tube sizes from 4" to 9", can be supplied for either flange or pedestal mounting; listed as standard by Underwriters Laboratories, and approved for Commercial Standards CS-75-56, and meets all local and state requirements. For complete information, literature, write Sundstrand Engineering Co., 1325 7th St., Rockford, Ill.

INDIAN SCHOOL ENLARGES ROOM

Architect Gerald Matson of Eureka is completing drawings for construction of a 5-classroom addition to the Hoopa Unified School in Humboldt County.

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ARCHITECT AND ENGINEER

AUGUST, 1956

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

PRIVATE ENTERPRISE DIGS IN

Hell's Canyon, through which tumbles the Snake River on its way to join the mighty Columbia in the Pacific Northwest, is a deep gorge on the Idaho-Oregon border.

Althought situated in a sparsely populated portion of the nation, the area is the focal point of one of the great debates in Congress involving an issue that has tremendous significance for people everywhere in the entire U.S.

The debate on Hell's Canyon is one of the most controversial questions before the Congress, and appears to be more political than technical or economic. It resolves itself down to question of "Government" or "Private" development of water power. One group argues that the federal government must develop the water power of the Snake River, while another group holds that development by a regulated electric company which is already engaged wholly in the business of producing and distributing electric water power is the better.

Two different development plans, representing the two opposite points of view, are involved. Under the private enterprise plan, the Idaho Power Company is already at work building one of three power dams for which it has been licensed by the Federal Power Commission. Total cost of the three-dam project is estimated at $133,000,000, to be financed entirely by private investors and when completed will pay about $10,000,000 annually in state, local and federal taxes.

Under the federal development plan, Congress is being asked to authorize a single power dam to cost $400,000,000 in federal taxes, plus many millions more for power transmission lines.

The question therefore becomes one of Private Enterprise, capable of developing, willing to invest in development, already on the job under government license, and willing and able to pay great sums of money in local, state and federal taxes; as against Federal Enterprise, admittedly expensive, unfairly competitive, tax consuming, and no tax revenues to local, state or federal governments.

* * *

Taking all types of construction into consideration, the percentage of colored plumbing fixtures used in new homes is about 30 percent, according to the Plumbing and Heating Industries Bureau.

* * *

ENGINEERS JOINT COUNCIL REPORT

Unlike the members of most learned professions, the engineer usually is an employee rather than a private practitioner. Surveys indicate that about eighty per cent of professional engineers are in the employee classification, and this situation sometimes creates special problems which are not inherent in the other professions. One such problem is how specifically to create and maintain an employment atmosphere consistent with high professional standards.

A special committee of Engineers Joint Council was charged with a study of this employment problem and has just released a booklet dealing with a means of education and "vertical communication to the membership" concerning conditions surrounding employment.

Thomas H. Chilton, president of the Engineers Joint Council, has the following to say about the Report:

"The report represents the labors of many thoughtful people who have considered and discussed the problems of engineers as employees. A wide diversity of views was to be expected on problems having as many ramifications as these have. The report was finally adopted only after review by the Engineers Joint Council Executive Committee and a special task committee following months of arduous work by the Engineers Joint Council's Committee on Employment Conditions.

"It is, therefore, not the work or view of any one individual, and perhaps everyone will find some part of it with which he does not fully agree. It does nevertheless represent, I believe, a significant appraisal of employment factors which deserve attention. The EJC Board of Directors endorses the recommendations contained in this report and strongly urges the constituent societies to examine this entire study carefully.

"Important responsibilities of the professional engineer, employers of engineers, engineering societies, and engineering educators are identified in the report. Each of us as professional engineers, and all others directly or indirectly associated with the profession, must strive diligently to establish a clear understanding of employment conditions necessary to meet professional employment expectations."

Chilton concludes by saying, "An employment environment which encourages full professional and technical development of employed engineers is essential to the advancement of the profession and the realization of their fullest contribution to the economy."

With this type of sincere approach to a grave problem, there should be no hesitancy on the part of any student to seek educational qualifications which would permit his becoming a part of the vital engineering profession.

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College Highlands Housing Development, Richmond

Carborundum Corp. Warehouse and Office, Mountain View

San Jose State College Science Building, San Jose

St. Francis Memorial Hospital Addition, San Francisco

Spinco Division of Beckman Instruments
Warehouse, Office and Laboratory Building, Palo Alto

Bert McDowell Company Warehouse, Redding

Pabco Products, Inc. Factory Building, Newark

Minneapolis-Honeywell Office and Warehouse Building, San Francisco

Sisters of Notre Dame Auditorium, Belmont

Rickey's Studio Inn Hotel Addition, Palo Alto

Southern Pacific Company Warehouse, San Francisco

State of California Honor Camp, High Rock, Calif.

Richmond Redevelopment Project, Richmond

California Spray Chemical Corp. Whse. and Bagging Building, Richmond

S. C. Johnson & Son Warehouse & Office Building, Millsdale, Burlingame

Fibreboard Products, Inc. Corrugating Plant, Antioch

Men's Physical Education Building, Arcata

Santa Clara County Jail, San Jose

Marine Firemen's Memorial Building, San Francisco

NEWS and COMMENT ON ART

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., has arranged a number of special exhibitions and event for the month of August, including:

SPECIAL EXHIBITIONS: Sport in Art, an exhibition sponsored by the magazine Sports Illustrated, comprising 102 paintings, watercolors and prints with sports as their theme; an exhibition of Paintings, by Maurice Lapp.

The ACHENBACH FOUNDATION for GRAPHIC ARTS, is featuring: at the Museum, an exhibition observing the 350th Anniversary of The Birth of Rembrandt Van Rijn, 1606-1669. The Loan Exhibition at the San Francisco Public Library is featuring a group of Prints, Travel Posters, and other Contemporary Graphic Arts items from Asia.

SPECIAL EVENTS: An organ recital each Saturday and Sunday at 3:00 p.m. by Richard Purvis and Ludwig Altman. Art Classes for children are held on Tuesday and Thursday at 10 a.m., ages 6 to 14. Classes are free of charge and materials are furnished.

The Museum is open daily, 10 a.m. to 5 p.m., Holidays 1-5 p.m.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the supervision of Beatrice Judd Ryan, is presenting an exhibition of Sculpture in Stine and Wood, by Don Sloan; and Metal Masks and Puppets, by Jon Caver; an exhibition of Original Prints by artists of the Pacific Coast, England, France and Italy is also being shown during August.

The Rotunda Gallery is located on the 4th Floor of the City of Paris.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is presenting a special number of exhibitions, and events, for August that are in keeping with the season of the year, including:

EXHIBITIONS: the Armando Reveron Retrospective; Landscape Architecture Today—An Introduction, this is an outstanding display sponsored by the California Redwood Association; a special selection from the Museum collections, features Photographs from the Alfred Stieglitz Collection and Paintings and Sculptures from the Permanent Collection; the International Color Woodcuts, organized by the Victoria and Albert Museum of London; an exhibition of the work of Three California Painters, Clayton Pinkerton, Fred Reichman and Peter Shoemaker; and the Charles Burchfield Retrospective.

SPECIAL EVENTS: Lecture Tours, based upon current exhibitions, are free each Sunday at 3:00 p.m.; Gallery Tours of current exhibitions are conducted by a Museum Staff member each Wednesday evening at 8:30 p.m.; The regular Museum activities—Art for the Layman, Adventures in drawing and Painting, and the Children's Saturday Morning Art Classes are in recess for the summer, but will be resumed in September.

The Museum is open daily: Monday 12 noon to 5 p.m.; Sunday and Holidays, 1 to 5 p.m.; all other days 12 noon to 10 p.m.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering a number of special exhibitions and events for August.

EXHIBITIONS: Included in exhibits scheduled for the month are—Paintings, Drawings and Prints, by June Wayne; an exhibition by the California Society of Etchers; Photographs of Venetian Villas; Paintings by Andrew Wyeth; Brass and Enamel by Willard Rosenquist; Batiks and Paintings by Mary Dumas; an exhibition depicting a Century and a Half of Paintings in Argentina; and Village Life in Comalapa, a special group of paintings by Andres Curuchich.

SPECIAL EVENTS: Classes in Art Enjoyment for Adults, conducted by Charles Lindstrom, offers Exercises in Oil Painting. This is a weekly series of elementary experiments in painting intended especially for those who have taken "Painting for Pleasure—Exercises in Perception." Classes given Saturday mornings at 10:30 (Starting September 8); these classes will be repeated on Wednesday afternoons at 2 o'clock, beginning September 12.

Other activities including Painting for Pleasure, Painting Workshop for Amateurs, Seminars in the History of Art; and Classes in Art for the Children, will recess during August and will be resumed early in September.

The Museum is open daily, no admission charge.

THE ARMANDO REVERON RETROSPECTIVE EXHIBIT

The retrospective exhibition of paintings by Armando Reveron, one of Venezuela's best known paint-

ers, who died in 1954, now being shown at the San Francisco Museum of Art, War Memorial Building, Civic Center, was organized by The Institute of Contemporary Art of Boston, with the assistance of the Creole Petroleum Company.

James S. Plaut, Director of The Institute of Contemporary Art, in the Introduction to the catalog of the exhibition, declares:

"There is an understandable tendency today for each country, despite the ever-narrowing gap in communications between nations, to consider its own star the most brilliant in the international constellation.

Thus, among painters, Reveron is to Venezuelans what Munch has been to Norway, or Orozco to the Mexicans, or Ensor for Belgium and John Marin for us. Once removed from the familiar sphere of context and appreciation, once placed in the world arena, a national figure undergoes the most searching critical scrutiny. Using this standard, one could surely not proclaim Reveron as a giant among twentieth century painters. He emerges, rather, as an exciting, individualistic talent whose production must take high rank in the galaxy of contemporary Latin-American painting.

Nor can we think of Reveron, in spite of the influence of French antecedents so manifest in his painting, as a disciplined artist following in the line of succession, let us say, from Ingres and Degas through Cezanne and Braque. Emotion and energy, with Reveron, outweigh intellect and synthesis.

There is a strong compulsion to think of him in terms of van Gogh's controlled fury, perhaps even more of Gauguin's exoticism. The latter impression is fortified, of course, by the extraordinary similarity in their common patterns of living. Reveron, in this respect, was the Gauguin of the Americas. Macuto was his Papeete, the Caribbean his South Pacific. Both men abandoned sophistication and sought truth in nature.

Here, then, is a highly picturesque figure in twentieth century art, whose uneven canvases, often quite rough, at times beautifully subtle, will surely hold great attraction for the American museum visitor."

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING CIVIC CENTER

SELF PORTRAIT

1948

black and colored pencils

21" x 25"

by

ARMANDO REVERON

Lent to the Exhibition by

Dr. Joel Valencia Parparcen

DOUGLAS FIR PLYWOOD ASSOCIATION LAUNCHES ARCHITECTURAL PROJECT

The relation of architect to industry was emphasized in word and action at the final sessions of the western fir plywood industry's annual meeting in Gearhart, Oregon, recently. Among other things, the 250 plywood manufacturers on hand were told that:

1. Douglas Fir Plywood Association has commissioned six ranking architects for creative research in the field of school design.

2. The association has named six faculty members from top design schools to develop ideas and structures keyed to leisure time.

3. Three other architects have been commissioned by the association to develop designs for expandable small churches in suburban areas.

4. The association has turned to still another architect to develop a simplified system of building applicable to any style of home.

Keynote speaker for the meeting was John Lyon Reid, A.I.A., of San Francisco. Reid is one of the architects which DFPA has retained for its research program in school design.

Reid told the manufacturers that design and building have progressed from the simplicity of the ancients to enormous complexity today. He pointed out that the architect today relies on a vast army of suppliers and contractors for the successful accomplishment of his job, and that a mutual understanding and respect between architect and supplier is vital.

The announcements, which were made by W. E. Difford, association managing director, point up the western fir plywood industry's new reliance on the architect and design as key elements in programming long-term market development. Joseph Weston, association field promotion director, heads the industry's design program. Says Weston of the school phase:

"We are seeking creative research in school design with emphasis on the relation of structure to educational activity. We want no part of anything that smacks in any way of stock plans for school houses."

The school architects retained by the association include Charles Colbert of New Orleans, La.; Hallman and Weems of Aiken, S. C.; John Lyon Reid Associates of San Francisco; Caudill, Rowlett & Schott, Partners, of Oklahoma City and Bryan, Texas; Robert Billsbrough Price of Tacoma, Wash.; and Paul Rudolph of Sarasota, Fla.

Although the association concedes that some of the work coming out of the program will undoubtedly be ahead of its time, much of it will be immediately applicable to many parts of the country. The association has not yet determined how the results will be presented. That depends upon what comes out of the program.

Difford also announced that the association has retained six faculty members of schools of architecture and design to develop ideas for informal shelter and a variety of other elements related to the increased leisure time that Americans now enjoy. The designers are:

Conrad Buff, University of Southern California; Charles Kratke, Art Center School, Los Angeles; Philip Thiel, University of California; Harry Glass, Art Institute, Chicago; Thomas McNulty, Massachusetts Institute of Technology; and Gerald Gulotta, Pratt Institute, Brooklyn.

This phase is keyed to the development of new patterns in leisure time. The association hopes to see all kinds of ideas for informal shelter from backyard shade areas to distant family retreats at the seashore or the mountains.

Then, pointing to the fact that church construction has not kept pace with rapid housing expansion in the suburbs, Difford told the manufactureres that the association has also commissioned three architects to develop designs for expandable churches. The aim of this program is to stimulate designs that retain the beauty of the church atmosphere in a basic structure that can be expanded later without losing its original character. The architects working on this phase are H. M. Moseley of Dallas, Tex.; Donald R. Wilkinson of Los Angeles, and Barry Byrne of Evanston, Ill. Others will be added to the program.

Difford also announced that the association has retained Chris Choate of Los Angeles to develop plans for homes keyed to a highly simplified system of construction that will fit the needs of the small contractor and the lumber dealer who supplies his materials. The plans will have style and sales appeal and they will range from small two-bedroom units to more elaborate residences.

GLADDING, McBEAN & COMPANY ANNOUNCE PLANT EXPANSION

Immediate construction of a $5,000,000 plant for the manufacture of vitrified clay pipe is planned by Gladding, McBean & Co. An initial expenditure of $3,000,000, with additional $2,000,000 ultimately, will be made on a total of 33 structures with 200,000 square feet of floor space.

Details of the modern and up-to-date plant and the role its highly mechanized, efficient manufacturing technique will play in fulfilling the sanitation needs of the West were revealed recently at a meeting of the Associated Sewer Contractors, Inc. in the Statler Hotel, Los Angeles, by C. W. Planje, president of the clay products firm.

Coupled with this announcement was information that the pioneer ceramic products company had discovered over a million tons of high-grade sewer pipe

(See next page)

clay in Bedford Canyon, five miles south of Corona. The plant will be located near the discovery.

In making the announcement, Planje stated that this new plant, a key factor in the company's current $8,000,000 expansion and modernization program, will result in production of a superior vitrified clay pipe. Its initial capacity will be rated at 6,000 tons per month with constant growth designed to bring capacity to 12,000 tons per month in approximately three years.

The plant will house a 450-foot-long tunnel kiln, the largest in the world. This kiln, plus ten periodic or "bee-hive" kilns will produce 6,000 tons of vitrified clay pipe per month when production is started in 1957. Full capacity will be 12,000 tons a month.

The group of buildings will include: bulk clay and grog storage bins, a grinding and screening building with two 10-foot grinding pans, a building housing 7 auger presses, 16 horizontal and vertical dryers, laboratories and offices, a lunchroom and locker building and a main office. The tunnel kiln will be housed in a building 100′ x 660′.

Five transformer stations rated at 750 k.v.a. each will use as much as 2,000,000 kilowatt hours of electricity per month. With temperatures over 2100° F., the giant kiln will consume up to 100,000,000 cubic feet of natural gas per month.

The tunnel kiln, which will require a half a million high-temperature refractories brick to construct, will accommodate 10x10-foot cars to carry the pipe on a continuous schedule, operating 24 hours a day.

There will be a minimum of industrial waste gases from the plant, and full precautions have been taken to guard against air pollution.

Not only will the plant be the world's most modern pipe manufacturing facility, but it will be one of the most scientifically lighted. Mercury vapor lighting will be used throughout.

When full production is attained, some 90 persons will be employed. Gladding, McBean & Co., established in 1875, has other manufacturing plants at Glendale, South Gate, Redondo Beach, Ione, Pittsburg and Lincoln, California, and in Mica and Renton, Washington.

PRODUCERS COUNCIL PLANS A TRAVELING PRODUCTS DISPLAY

Plans for a $200,000 traveling building products exhibition have been announced by William Gillett, national president of the Producers Council, Inc., with the exhibit to be known as the Home Builders Caravan and prepared for viewing by builders, residential architects, and subcontracting groups.

In telling about the exhibition, Gillett said, "The Caravan will travel over 25,000 miles and will be shown in 38 major cities. Each exhibition will be sponsored locally by one of our chapters, whose membership is made up of local sales representatives or distributors for the Council's member-companies. The premiere is scheduled for Washington, D. C. on August 30."

The Caravan is the third traveling products exhibition which the Council has sponsored since 1954. The two previous Caravans were shown to architectural audiences. The new exhibition is intended to present ideas as well as products. The displays of the participating manufacturers will stress ideas which will help in building and merchandising homes. Construction economies, efficiencies and new products will also be emphasized.

All of the display units will be transported in a large van, and will be set up in hotel ballrooms for the showings. To stimulate attendance, the Council is offering a grand prize of a 21-day, all expense trip to Europe for two. The Caravan will be on the road for seven months.

ARCHITECTS WILL DESIGN WINTER OLYMPIC GAMES FACILITIES

Two of the West Coast's most outstanding architectural firms have been commissioned by the VIII Winter Olympic Games Committee, in charge of the events to be staged in the Lake Tahoe, California-Nevada area, to design all of the facilities to be used by contestants, judges and others during the holding of the games in Squaw Valley in 1960.

ARCHITECTS William Corlett (left), Wendell R. Spackman, Robert S. Kitchen, and Frank B. Hunt view Squaw Valley site of the VIII Winter Olympic Games prior to designing operational facilities.

The two firms receiving this international honor and recognition are Corlett and Spackman, and Kitchen and Hunt, both of San Francisco. The two organizations have previously worked together in designing of buildings for the University of California, Berkeley and Davis campuses. Governor Goodwin Knight recently appointed Wendell R. Spackman to membership on the California State Board of Architectural Examiners.

FACADE of the new Chandler's Shoe Store in Pasadena features new exciting materials. The Lake Street entrance is accentuated by a floating canopy of intriguing design and textures.

NEW ARCHITECTURAL IDEAS USED IN MODERN CALIFORNIA SHOE SALON

PASADENA, CALIFORNIA

The architectural firm of Kanner-Mayer of Los Angeles has designed a unique and distinctive shoe salon for Edison Brothers Stores, Inc., of St. Louis.

This new ladies' shoe salon is that of the Chandler's Shoe Store in Pasadena, California, located on South Lake street, in the middle of one of the most exclusive shopping districts in Southern California. The exterior facade features such new exciting construction materials as Italian glass mosaic tile and ceramic veneer. The imported tile was set by hand in Italy and then shipped to the job in Pasadena.

The street entrance is accentuated by a floating canopy of intriguing design and contrasting textures. The mall, or parking lot entrance, is approached through a landscaped walkway shaded by an interestingly curved canopy.

The interior of the store expresses a functional use of the materials for panellings and wall treatments. Displays, floor show cases, and so on, are framed in bronze, for instance, as are all exposed metal parts.

The motif of the imported tile used in the exterior

is repeated in several of the interior display tables and also reflected in a centrally located decorative fountain containing a striking free form "objet d'art." It is a cast aluminum abstract sculpture designed for Edison Brothers by the Southern California artists Jerome and Evelyn Ackerman.

A subtle blend of colors creates a harmonious feeling with the textural aspects of the interior salon. The sculptured plaster above the show cases in the central area dramatically accentuates the wall display. Light fixtures are of original design and are integrated with the various selling areas for atmosphere and function. Lavish plantings both in the show windows and for interior decoration further emphasize the pleasant, relaxing, and luxurious atmosphere.

Edison Brothers was among the first retailers to experiment with the spacious suburban type of open architecture. The Company was founded in Atlanta, Georgia in 1922 and in 1929 the firm moved its headquarters to St. Louis, Missouri.

INTERIOR repeats motif of materials used for exterior treatment. Display appointments are framed in branze. (Above.)

BLEND OF COLORS creates harmoniaus, relaxing atmosphere. Light fixtures are original design, integrated with various selling and display areas.

DR. WARREN WEISETH Residence, Eugene, Oregon

WESTERN HOME ENTRANCES ARE VARIED

By ARTHUR W. PRIAULX

Some architects complain that not enough attention is being given in the design of the modern home to the entrance and the entry way. They admit that design and styling has come a long way since the first bear skin was stretched across the cave entrance and the elk hide flap made to cover the teepee doorway. But, they point out, the necessity which prompted the construction of the first hand-hewn slab doors on the pioneers' log cabins still seems to dominate the thinking of some modern day designers who overlook completely the esthetic possibilities for setting the pace of the home at the entry way.

Fortunately, here on the west coast, most architects are exploiting the entrance design to prescribe the wonders awaiting within the lovely contemporary homes of our times.

The most effective and beautiful entrances are not the garish affairs which look like the entrance to some chichi night spot flooded with neon, nor are they the ones where the architect is striving too hard for the

uncommon or one with the most originality and individuality, although this is important within reason. Instead, the western architect achieves his greatest effect and richness in his structures not with conciously introduced ornaments but through the subtle development of exposed structural elements, natural materials like native stone and native Douglas fir, western red cedar, redwood and west coast hemlock, coupled with meticulous craftsmanship.

Among the contemporary features he exploits and which have become popular dominants in this new form of residential architecture taking form on the west coast are post-and-lintel skeletal frame construction, the close indoor-outdoor schemes, modular systems, exposed beams. He utilizes with an astounding subtlety the ornamental quality of the structural system and beauty of texture and color of his materials to achieve the ultimate in simplicity and effectiveness in his entrances as in the rest of the home.

Contrasting line and form can create an entrance of charm and distinction, which sort of whets the appetite for what the visitor will find in the remainder of the home. But equally as important, it establishes an esthetic discipline for those having an appreciation of beauty as a part of their daily lives. It might be trite to say that contemporary developments in architecture in our western homes have evolved pretty much from our demands for a way of life, a way of life in which outdoor and indoor living are almost inseparable. In few other parts of the home is the opportunity afforded for a wedding of outdoor and indoor more possible than in and around the main entrance.

These entrances can be beautifully designed to come in off the garden or a courtyard. Even where the stark-

Color contrasts accentuate this friendly home in the Old South styling, highlighting interesting texture of wood siding.

ness of a front entrance is mandatory, louvered screens, subtle use of line and form, variation of materials and textures can create a thing of beauty in the entrance. The entrance should be the means of achieving a subtle fusion of garden and indoor living areas.

Unless the family by deliberate intent strives for formality and austere atmosphere, the entrance can be a friendly and inviting area of the home. Indoor planters and solariums help bridge the gap with the outdoors. Overhead trellises, vine covered when possible, may lead into a very ordinary entrance, but the composite effective is softened pleasantly.

Some of the most charming entrances have grown out of the necessity for having the entrance close by the carport. Wide overhanging eaves can be used to protect from weather on the journey from garage or carport, and they can serve as a friendly and hospitable passageway to the entrance area.

All sorts of variations of the old porch plan have evolved from the imagination of the architect to dress up the entrance and make it more in the western theme of informal living. Terraces, lanais and decks are made to serve double duty for entrances and lounging areas.

An outstanding example of the new form of contemporary entrances was designed by Architect Richard Sundeleaf for the Edwin Francis home in Portland (see page 13, bottom). The entrance way is below the street level, and rather than have steps directly into the porch, he opened up a cozy concrete surfaced courtyard which becomes at once a friendly lounging area and an entrance.

To create a perfect tie with the lovely landscaped exterior, he designed solariums on either side of a wide entrance door. Large glass areas used to accentuate the texture of the Douglas fir boards and batten siding add to the friendliness of this entrance. Louvered boards of Douglas fir serve as effective frames for the tall panes of glass and repeat the boards and batten theme in a striking manner. A wide overhanging roof serves as shelter for the visitor at the door. The green-

Striking example of use of converging lines to create a remarkably effective entrance. John Stafford, Architect.

ery within and without the home creates a oneness between the home and its surroundings.

The entryway of the Francis home is as striking as the exterior (see page 16). A raised entrance area is set forth by a divider wall of louvered screens above and solid fir paneling below and acts as a definite separation from the living room which is three steps lower. Exposed beams and ceiling of fir in the entrance way create a definite union with the immediate exterior entrance. The entry gets light from the two walls of louvered areas which makes for an extremely friendly introduction to this home. The interior louvers are of 2x10 Douglas fir forming simple pillars and matching the paneled walls of the living room and entrance area. All lines point to the doorway which is emphasized further by planters on either side.

A porte-cochère over a wide glass area serves as a distinguished entrance for the Oliver Willard home in Eugene designed by Architect John Stafford (see page 15). A boards and batten exterior of western red cedar

Commercial entrances can be as attractive as in the loveliest homes. Architect John Loren Reynolds has designed the above for the Rasboro Lumber Company of Springfield.

Beautiful blending of surroundings with entrance area designed by Architect Richard Sundeleaf for the Edwin Francis residence in Portland, Oregon.

carries right into this home where cedar was used effectively for paneling and in a large compartment storage wall which sets off the living room, which in this case is three steps above the entrance level. Cedar tub planters under the porte-cochère act as a go-between for the surroundings of this fine home and its informal interior.

The Dr. Warren Weiseth home in Eugene created by Architects Wilmsen and Endicott (see page 10) offers a study in contrasts in its entrance way. A split-level home, a story-and-a-half glass area around the attractive doorway serves to reduce the apparent height of the home. But, the real feature of this entrance is the studied use of western red cedar drop siding in contrast with boards and batten areas. An overhanging roof of exposed beams and ceiling protects the doorway. The walkway curves along a brick retaining wall which separates the two levels of the lawn. The cedar exterior of this home makes an ideal component for the natural surroundings, a wooded hilltop. Wide expanses of glass further accentuate the intimate relationship of this home with its site.

An interesting example of the use of exposed structural elements to create a charmingly simple entrance area is in a Eugene home conceived by Designer William Taylor (see page 14). The entrance door, bordered on one side by a stained window, is in the apex of this L-shaped home. A feeling of stained glass is achieved by the use of colored vinyl plastics bonded to the glass with a liquid adhesive in a process originated by Willard K. Martin, a student at the University of Oregon school of architecture and allied arts. Martin points out that the color may be used on glass and clear or translucent plastic, and emits a rich glow through varying changes of the sun's rays. The artistry of this young student has attracted considerable attention in the Willamette valley and his stained windows have appeared in other homes to add to their charm and beauty.

Taylor has designed a wide overhanging roof section

Simplicity marks this entrance section where line and texture play an important role. Designed by William Taylor.

along one interior courtyard wall which covers a concrete terrace. The terrace serves double duty as an entrance walk and a lounging area. Texture is all important in creating the subtle effects of this home. Random spaced grooves have been cut in the vertically applied cedar siding to give emphasis to line and the form and simplicity of this exterior area. The texture of the rough sawn cedar adds its own distinctive charm and the overall impact is to create a delightfully simple and informal entrance.

A powerfully effective use of converging lines in the John Bonzer home at Eugene is another example of the imagination of Architect John Stafford (see page 12). A covered portico leading from the street is built with exposed beams and ceiling, but the beams run the long way of the roof section joining up with an overhanging roof section extending at right angles. The converging right angle beams focus attention on the entry. A pleasing effect is caused by the vertical lines of the boards and batten red cedar siding. This entrance area is a study in abstracts, and the entire effect depends upon interlacing of the vertical and horizontal lines of the structural material so that the eye automatically comes to the entrance. Of course, the pleasing texture of rough sawn cedar siding and the contrasting smooth finish of the surfaced Douglas fir beams continues the realization of beautiful contrasting variation to a pleasing and remarkable degree.

Another John Stafford creation is the Henry Hall home in Eugene (see page 11) which combines some of the delightful features of Old South hospitality in the form of a low entrance veranda with a relatively small home. Color and texture were used to maximum advantage in creating a warm and inviting entrance area. Rough sawn western red cedar siding in board and batten style was stained a pearl gray and all the trim, including veranda posts, exposed beams and ceiling and flanking louvered screen on one side of the entrance door, was painted white. The effect is to soften the vertical lines of the siding and to achieve an interesting and inviting entrance area. Use of the stain serves to highlight the rough texture of the cedar and brings out the grain and characteristics most dramatically. Low flower boxes of cedar, carrying out

Friendly, open entrance ties outdoors and indoors together in this attractive home designed by Architect John Stofford.

OLIVER WILLARD

Residence

Eugene, Oregon

the color scheme, add a charming footnote to an already delightful setting. A muted color interest has been heightened by a black recess door, which is even further accented by the light louver screen on the right of the door.

Commercial entrances are coming in for much more attention as demonstrated by Architect John Loren Reynolds in the entrance design at the main office of the Rosboro Lumber Company in Springfield (see page 13 top). This is a busy office where visitors must often wait for conferences with company executives, so the problem was to develop a sort of lobby-entrance-reception hall and yet not utilize too much space. Architect Reynolds decided to combine the beautiful texture of western red cedar with growing plants to create an atmosphere of informality and comfort. The entry was paneled in cedar, random width, tongue-and-groove. On one wall an ensemble in cedar was designed which includes a comfortable banquette flanked by attached installations at each end. One is a compact magazine rack with flat top for a planter and the other is merely a matching blank cabinet in cedar with a flat top which can be used for a planter or decorative piece of china. Projecting from the front of this blank cabinet is a low copper lined cedar planter which fills in the space directly in front of the floor-to-ceiling window which flanks the entrance door. The effect is to create the atmosphere of a home in this commercial lobby.

Architects advise that care must be taken when location of the entrance is away from the street, to avoid projecting to the public view a blank or uninteresting wall. There is a tendency to have the entrance open onto a garden or courtyard, where more privacy can be developed and more intimacy created. This is possible especially where the carport or garage has been located towards the rear of the lot and where it is tied in with the decorative layout of the garden area. By locating the entrance on the garden side, guests arriving by car have a much more pleasant introduction to the home than if they were forced to use a rear entrance, or forced to walk clear around to the front. Care must be taken in landscaping where the home does not face the street, and in many cases, french doors and large windows are disguised with shrubbery

(See page 33)

Entryway of the Edwin Francis home in Portland is as striking as the exterior raised entrance area.

3-YEAR BUILDING RECORD

BARRETT CONSTRUCTION COMPANY—SAN FRANCISCO

By FRED EYROND

The history of the construction industry on the Pacific Coast shows that from time to time, as economic conditions, personnel, and progress of the area varies to meet changing conditions, new contracting firms emerge from the dissolution of older companies that frequently have long records of successful operations. These new organizations, in many instances, are only new in the sense that they adopt a new name, possibly a new focal point of operation and possibly a new ownership and management structure.

In reality these new companies are mature, complete organizations which have experienced personnel and the backlog of experience that qualifies them for a continuing and a broader leadership in the construction industry.

Such is the case with the Barrett Construction Company of San Francisco, which was organized in its present format in 1953 following the dissolution of the well known contracting firm of Barrett & Hilp.

For the past three years the Barrett Construction Company has carried on a general contracting business contributing conspicuously to the amazing post-war

Progress Picture, Students' Residence, University of San Francsco

BARRETT CONSTRUCTION CO. . . .

BARRETT EXECUTIVES

Richard F. Barrett, Jr.

J. F. Barrett

Richard H. Barrett

(left to right)

growth of the West, and more particularly Northern California.

Comprising the general partners, Barrett Construction Company is represented by J. Frank Barrett and his two sons, John F. Barrett, Jr., and Richard H. Barrett, a trio that needs no formal introduction to the nation's building industry. Frank Barrett is the former president of Barrett & Hilp, general contractors, and under his able leadership that firm performed many millions of dollars worth of construction work over a period of more than forty years.

John Barrett was raised in the environment of the construction industry and following graduation from high school attended the University of Santa Clara at Santa Clara. Since 1938 he has been actively engaged in all phases of construction work—with Barrett & Hilp until 1953, and since that time as a general partner in the Barrett Construction Company.

Like his brother, Richard Barrett became exposed to the atmosphere of a "contractor's" life early in life

PHELAN HALL . . . University of San Francisco.

At Right:
New Chapel and wing of the St. Joseph's College in Mountain View, California.

Lower View:
Proposed new addition to the St. Francis Hospital, San Francisco.

Austin Company Engineers

THE BERT McDOWELL office and warehouse, Redding, California

and following high school graduation also attended the Engineering College of the University of Santa Clara. Since completing college he has had a broad experience in both field and office engineering—first with the Barrett & Hilp firm, and subsequently with the Barrett Construction Company. Richard Barrett is currently directing the residential development division of the firm and has a number of outstanding projects under way in the Bay Area at the present time.

It is generally conceded among those within the industry that the most important single factor in the success of any contracting organization is the ability of

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tinuing success of any organization, but, all are wasted and their effort goes for naught, if the field superintendents are unable to follow through and competently construct any given project. The Barrett Construction Company is singularly fortunate in having a corps of superintendents whose proven ability and broad experience is unmatched. Led by George McKeever, general superintendent, who has a background of 45 years in the construction industry, their average length of continued service with Barrett is over 28 years. This permanence of employment is without question an outstanding factor in the success of the Barrett building activities.

Shortly after World War II, Frank Barrett foresaw to some extent the growth that would come to California and the West, and the attendant need for residen-

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INTERIOR of re-development area residential construction — showing typical Western architecture.

tial dwellings. Since that time several thousand houses in a number of tracts have been completed, and at present the firm is developing College Highlands, a residential community of 600 homes in Richmond, California. Another interesting residential project is the redevelopment of certain areas in the City of Richmond which formerly contained temporary war-time housing.

The Barrett Construction Company has entered into a contract with the City of Richmond for the purchase

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of cleared, developed acreage upon which will be built attractive residential units for sale to individual homeowners. This project is a forerunner of many such that will be constructed in various cities of the United States.

The firm's overall contracting activities since its formation have been varied and interesting. Recently completed contracts include a new chapel and wing at St. Joseph's College in Mountain View, California, at a cost of over $2,000,000, and Phelan Hall, a student residence at the University of San Francisco, at a cost of $1,400,000. Currently under construction are an addition to St. Francis Memorial Hospital, San Francisco for $1,200,000; a Science Building for San Jose

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(See page 30)

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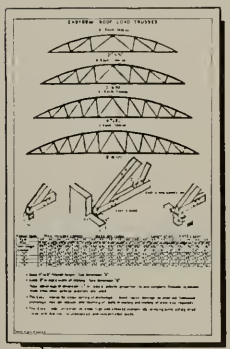

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SANTA CLARA-SANTA CRUZ COUNTIES CHAPTER

The Chapter will participate in an exhibit being prepared by the Women's Architectural League for exhibition in Palo Alto in September in conjunction with the "Design At Home Show." Building other than residences may be shown this year. The Chapter is also preparing an exhibit which will be shown at the State Convention in October at Yosemite Park. A number of members are contributing considerable time, effort and funds in support of Proposition No. 10, which will be voted on at the General Election in November, and pertains to the right of public agencies to employ the services of a private architect and engineer.

WOMEN'S ARCHITECTURAL LEAGUE OF SAN FRANCISCO

The first meeting of the WAL, following the summer vacation, will be held on Tuesday, September 18, at the San Francisco Museum of Art, War Memorial Building, Civic Center. Luncheon reservations are in charge of Mrs. R. Laverty, or Mrs. Keplar Johnson.

CALIFORNIA COUNCIL OF ARCHITECTS

Emphasis at the 1956 Convention of the California Council of Architects, scheduled for October 10-14 in Yosemite Valley, will be placed on evaluation of the architect's role in the development of his state and

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Producers' Council — Northern California Chapter (See Special Page)

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his community, according to William Corlett, Architect, San Francisco, and chairman of the Convention Advisory Committee which is in charge of planning the professional program.

Seminars primarily concerned with School Building, Hospital and Health, and Home Building Industry, are scheduled for Thursday, October 11, in the morning.

Dr. Stephen C. Pepper, author and lecturer on philosophy and aesthetics, will keynote the conference program at the Thursday afternoon technical session.

Seminar's on Public Relations, and Architectural Practices, Friday morning; and a Panel Discussion Friday afternoon with Cornelius Deasy, Architect of Los Angeles serving as Moderator; the annual Producers Council sports program on Saturday, will conclude convention plans.

Architects who plan on attending the Yosemite convention should get their reservations in early, John Lyon Reid, President of the Council advises.

SAN DIEGO CHAPTER

No general meeting was held during August and the next meeting has been set for September 12, however the Executive Committee of the Chapter met on August 6th to consider a number of special matters including support of the state-wide campaign in support of Proposition No. 10, on the November general election ballot. President Frank Hope appointed Victor Wulff as Chapter member to meet monthly with the San Diego Building Department.

SOUTHERN CALIFORNIA CHAPTER

The August meeting included a Tour of the New Tishman Building at Catalina and Wilshire Blvd.,

(See page 30)

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C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

Structural Engineers Association of Northern California

Walter L. Dickey, President; Henry J. Degenkolb, Vice-President; Samuel H. Clark, Secretary; William K. Cloud, Treasurer; and Cecil H. Wells, Jr., Asst. Secy. DIRECTORS, William W. Brewer, Chas. D. De Maria, Clarence E. Rinne, Howard A. Schirmer, and James L. Stratta. Office of Secy., 411 Market St., San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Sec.y-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS SPONSOR TELEVISION SERIES

"Explorers of Tomorrow," a series of programs designed to interest youngsters in careers in science and engineering is being presented by San Francisco Station KROW, Channel 4, on Saturday's. A recent program was devoted to structural engineering and was sponsored by the Structural Engineers Association and the California Academy of Sciences. Dr. Earl S. Herald, of the Academy, served as host, while Bruce Dunwoody, Public Relations Committee Chairman of the SEA represented the engineering organization.

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WASHINGTON STRUCTURAL ENGINEERS ASSOCIATION — Seattle Chapter

Howard Schirmer, past president of the Structural Engineers Association of Northern California, was the principal speaker at a recent meeting, taking as his subject "The Structural Engineers of California and Their Associations." Development and experiences of the engineers professional group over the past 25-years were discussed.

C. A. Norse, president of the Seattle Chapter, presided.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

The August meeting was devoted to the annual Field Day, held this year at the Riviera Country club, Los Angeles county. Special events included golf, swimming in the Pacific Ocean, baseball and the annual dinner in the evening.

New members joining the association include: Marvin Baker, Carleton A. Chambers, Heber J. Cunliffe, John P. Gustafson, and Charles A. Knight, Jr.

AMERICAN SOCIETY OF CIVIL ENGINEERS—San Francisco

"Planning for the Future Growth of the San Francisco Bay Area," was the subject of the regular Section meeting of the Engineers Club on August 21st. Principal speaker was Lawrence Livingston Jr., regional planner who served as planning consultant on the recently completed Bay Area rapid transit survey.

Livingston pointed out the need for regional planning in the Bay Area, and the future prospects for an effective regional planning organization supported by state legislation. An Assembly interim committee will begin hearings on regional planning legislation in

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

Col. Wm. F. Cassidy, President; Cmdr. W. J. Valentine, 1st Vice-President; Col. Edwin M. Eads, 2nd Vice-President; Bob Cook, Secretary; C. D. Koerner, Treasurer. Directors Col. J. A. Graf, Capt. A. P. Gardiner, P. W. Kohlhaas, C. G. Austin and C. R. Graff.

San Francisco in September. Limitations on further growth imposed by transportation, water supply, and other public facilities, and by the availability of land and methods of overcoming them are scheduled for consideration.

Several types of future development patterns are possible for the Bay Area with its 78 independent governmental units. A Los Angeles-type urban sprawl or creation of several independent and disconnected sub-regions is possible. One of these will happen instead of the more desirable pattern of an integrated, well organized region unless an effective planning job is done now, especially in transportation, reported Livingston.

CALIFORNIA ENGINEER EXAMINATIONS SCHEDULE

The California Board of Registration for Civil and Professional Engineers has announced the following schedule for the next semi-annual examinations to be held during November and December.

Engineer in Training, December; Professional Registration, December 8; Land Surveyor, December 8; Structural Auth., November 23-24.

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

The annual convention of the Structural Engineers Association of California, scheduled for October 11-13, in Reno, Nevada, will bring together prominent civil engineers engaged in the design and construction of bridges, large buildings, dams, etc. requiring considerable quantities of material, from all parts of the West.

Technical programs will include many advance theories of structural engineering study prepared by University Engineering Faculty members and other National authorities. Among subjects to be discussed will be: "Hyperbolic-Paraboloid Roof Surfaces," "Plastics as a Future Structural Material," "The Use of High Strength Steels with Welded Fastenings," and other similar subjects.

Civil engineers and all structural engineers are welcome to the convention. Charles M. Herd, Chief Construction Engineer, Division of Architecture, State of California, is president of the organization and will preside at the meetings.

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A.I.A. ACTIVITIES

(From page 27)

Los Angeles, followed by dinner at the Chapman Park Hotel. Tours of the Tishman Building were under the direction of Edgardo Contini, Structural Engineer for the project.

Victor Gruen, AIA, spoke at the business meeting on the role of the Architect in the design of this and other commercial buildings, and showed a number of slides and exhibits of current work. Edgardo Contini spoke on the structural aspects of the Tishman Building. Arrangements for the program were under the direction of Stewart Kerr, Program Chairman of the Chapter.

PASADENA CHAPTER

The reguular August meeting held at Eaton's Santa Ana, Arcadia, was devoted to a consideration of "Public Relations."

A panel discussion, with Fred Chase serving as moderator, delved into the ramifications of the major problems facing the Architect due to the lack of understanding of the architect and his services by the general public.

NORTHERN CALIFORNIA CHAPTER

President Allen recently announced that plans were being made for holding of a Chapter Executive Board meeting in Ukiah at which it is expected many architects of the north-coastal counties will attend and become better acquainted with the work of the Chapter. Following four years absence, it is expected the Honor Awards Program will be resumed in the Spring of 1957, according to George Rockrise, newly appointed Awards Committee chairman.

ARCHITECTS HERTZKA & KNOWLES, Widely known architectural firm of San Francisco, and the firm of Skidmore, Owings & Merrill, Architects, are preparing plans for the new Crown-Zellerbach office building to be built in San Francisco.

A. E. BARNES, manager Architectural Products Division, Gladding, McBean & Company, San Francisco, will address the Modern Masonry Conference in Washington, D. C., September 19-20, on the subject "Ceramic Veneer Panelizing."

BARRETT CONSTRUCTION CO.

(From page 25)

Grocers, S. C. Johnson & Son, Fibreboard Products, and many others.

In the sense that Barrett Construction Company is a new entity it looks forward with youthful enthusiasm to the part it is likely to play in the inevitable future growth of California and the West. In the sense that it is a mature, experienced, contracting firm it has the warming satisfaction of having contributed its part to the growth and welfare of the economy.

RAMO-WOOLDRIDGE RESEARCH CENTER

The Ramo-Wooldridge Corporation is constructing a new $14,000,000 Research and Development Center on a 40-acre tract at the corner of Aviation and El Segundo Boulevards in Los Angeles.

Designed by the firm of Albert C. Martin and Associates, Architects and Engineers, working in close collaboration with planning units within the R-W Corp'n, the project is one of the most carefully planned and integrated research and development centers in the nation, and features five divisional buildings; a multi-story administration building, a large pilot-line manufacturing structure, a cafeteria, and auditorium-conference building seating 500, and a central hall.

NEW JUVENILE HALL SAN JOSE

The architectural firm of Allan M. Walter & Associates, 45 E. William street, San Jose, is working on plans and specifications for construction of a new Juvenile Hall to be built in San Jose for the Santa Clara county Board of Supervisors.

The new facilities will be 1-and part 2-story, reinforced concrete, detention type windows, and will cost an estimated $1,270,000.

VACAVILLE HIGH SCHOOL ADDITION

Architects Koblik & Fisher, 2203 13th street, Sacramento, are preparing drawings for construction of a frame and stucco addition to the Vacaville High School for the Vacaville Union High School District.

Facilities will include 4-classrooms, speech, arts buildings; an extension to the gymnasium and shower and locker rooms. Estimated cost of the work is $350,000.

ENGINEERING SOCIETY ALTERS SECTION NAME

The American Society of Civil Engineers, with national headquarters in New York City, has announced the organization of the Phoenix Branch of the Arizona Section to serve Maricopa County members.

Announcement was aslo made that the Northeastern Section has been renamed the Massachusetts Section, and the Providence Section has been renamed the Rhode Island Section.

GORDON TONGUE NAMED TO CONCRETE BOARD

Gordon Tongue, president of Northwestern Portland Cement Company of Seattle, has been elected to the board of directors of the Portland Cement Association, a national organization.

He has been connected with the cement industry in the Pacific Northwest since 1913, and fills a vacancy on the Association's board created by the resignation of Chester M. Reitze, of Seattle, Tongue is a past president of the Rotary Club of Seattle, is presently vice-president of the Association of Washington Industries, and a director of the Automobile Club of Washington.

NEW JOSAM-PACIFIC DIRECTOR OF SALES

M. R. McLaughlin, vice-president and General Sales Manager of Josam Manufacturing Company of Michigan City, Indiana, has taken over the duties of Director of Sales of Josam Pacific Company and will maintain offices at the firm headquarters in San Francisco.

Josam Pacific Company has been the Western Division of Josam for almost twenty-five years and is now headed by Stuart N. Greenberg, also president of M. Greenberg's Sons.

The firm has representatives covering eight western states and stocks a complete line of floor and roof drains, backwater valves, interceptors, shock absorbers, swimming pool fillings, marine drainage fittings, and many other plumbing specialties.

LOS ANGELES FHA INSURANCE LARGE

In the Los Angeles-Long Beach metropolitan area last year, the Federal Housing Administration issued 10,792 home mortgages totaling $112,898,000, according to a recent announcement by Capt. Norman M. Lyon, FHA Director in the area.

The average new home in this area financed with a FHA-insured mortgage in 1955 was appraised at $11,562. It had an area of 1187 square feet, exclusive of garage and finished attic spaces, and contained 5.4 rooms, including 3.3 bedrooms. About 99.3% of the properties had garage facilities of some kind.

The average owner, whose monthly income was $507.71, obtained a mortgage loan of $10,157 repayable in monthly installments over a term averaging 26 years. The monthly mortgage payment to principal, interest, taxes and insurance averaged $74.83. This amount, plus estimated maintenance costs and regular operating expenses such as water, gas, electricity and fuel, brought the owner's total prospective housing expense to $92.67, or 18.3% of his monthly income.

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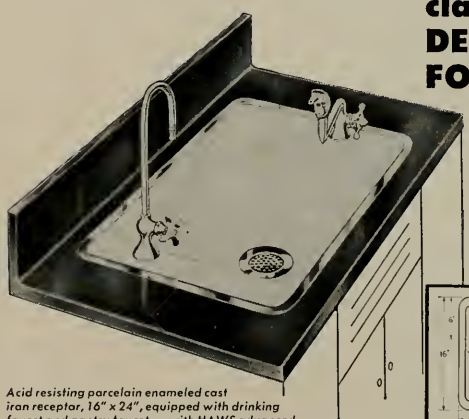

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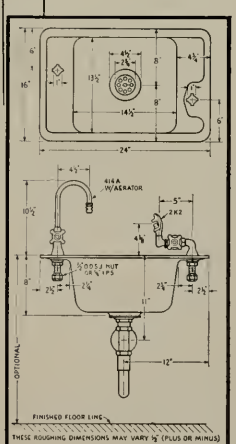

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STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"Wind Tunnels and Some Aspects of Their Construction Design," was the principal subject of a talk given at the August meeting by J. Lloyd Jones, Unitary Group, Ames Aeronautical Laboratory of National Advisory Committee for Aeronautics, Moffett Field, California. The program, sponsored by the Junior Activities Committee, followed a "curtain raiser" panel discussion on "What The Junior Members Are Thinking" by junior members. Three minute talks on "Gaining Both Field and Office Experience," and "Design or Sales Engineering as a Career," were made by Winifred Hutton, Sam Fletcher, Bob Hammill, Bob Wendlandt and Boris Katz.

New Members include: George W. Coleman, Melvin H. Klyce, and Simon Peters. Affiliate Members Elvan R. Babylon and Hugh Cassidy.

SOCIETY OF AMERICAN MILITARY ENGINEERS — San Francisco Post

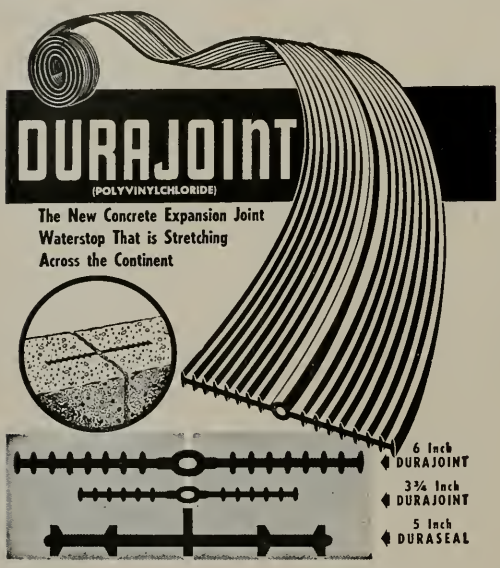
"Prestressed Concrete Construction of Lake Pentchartain Causeway, New Orleans," was the subject of a talk by George F. Ferris at the August meeting held in the Presidio Officers Club, Presidio of San Francisco.

Ferris, a graduate of the University of Florida in 1924, was associated with the Turner Construction Company from 1929 to 1946, during which time he served as general manager of the Operating Committee, Contractors, Pacific Naval Air Bases. In 1946 Ferris was elected a director and vice-president of the Raymond Concrete Pile Company and now serves the firm as its president.

CALIFORNIA STATE FAIR FEATURES CONSTRUCTION

Construction and design, their evolution and never-ending improvement, are part and parcel of the California State Fair and Exposition, scheduled for Sacramento, August 29-September 9th.

Progressive innovations in the hundreds of exhibits and events are dependent on versatility of construction and design, and this is even more the case this



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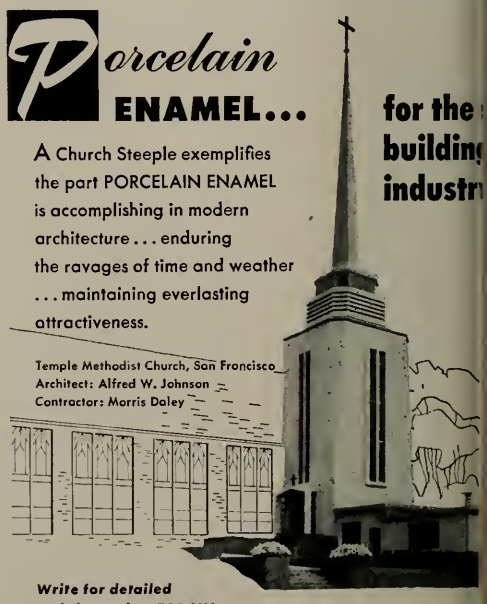
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WALTER L. DICKEY, The Bechtel Corpn, San Francisco, will address the Modern Masonry Conference, September 19-20, Washington, D. C. on the subject "Reinforced Masonry Walls."

WESTERN HOME ENTRANCES

(From page 16)

in such a manner that lack of an entrance on the exposed wall is compensated for.

Of course, the garden entrance offers a wide range of intriguing possibilities for exploitation. It is ideal for the informal home where indoor and outdoor living are so closely intertwined. It allows for more liberal use of large glass areas facing the gardens. It also permits a different floor plan, with many housewives preferring their kitchen and utility areas on the street side, with bedrooms and quieter rooms away from street noises. There is a feeling among some architects that better zoning of the home is possible when the entrance and living areas are permitted to open onto garden areas away from the street. Also, it is possible to utilize much narrower sites and retain the separation of use areas with greater ease and less lost space. Elimination of waste hall space can be accomplished in floor plans designed so the entrance is towards the center with cooking and eating areas opening off the living areas on one side and sleeping areas on the other wing of the home.

Intimate encolsed courts can be developed on very ordinary and unlikely home sites and designed to become an integral part of the entrance when they are planned away from the street. More widespread use of the automobile, and especially the growth of the two-car family puts emphasis on the entrance closer to carport and garage or at least near the driveway area.

A study of newer homes and of homes designed in the past half dozen years points up what we have been saying. More attention is being given to making the home entrance attractive, friendly and functional in tying together indoors and outdoors.

PHOTO CREDITS: Arrow Studio, Pages 8, 9; Photo Art Commercial Studio, Pages 10, 12, 13 top, 14, 15; West Coast Lumbermen's Ass'n, Pages 11, 13 bottom, 16; Haas & Associates, Page 17; Photographic Services, Page 18 bottom; Kaiser Services, Page 18 top; George Shimmon, Page 19 bottom; Ed Arnold, Page 19 top; Harry Dowmand Commercial Photo, Page 20; Phil Fein Photo, Page 21 top; Frank C. Treseder, AIA, Page 21 bottom; Allendale Photo Studio-George A. Tagney, Pages 23, 24, 25.

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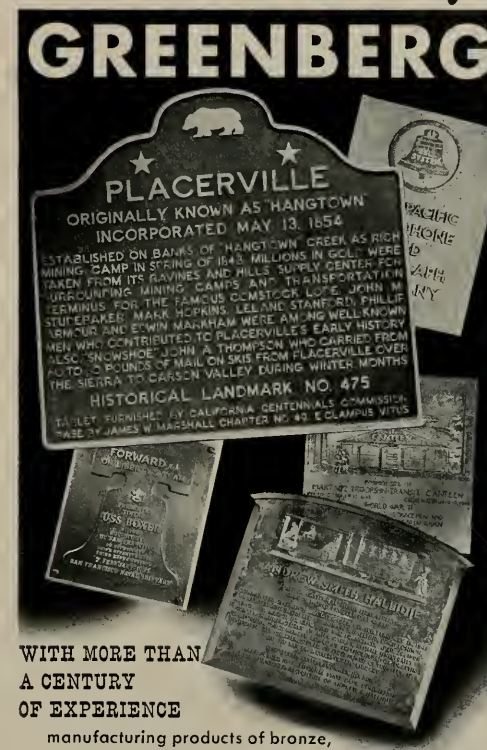

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WENDELL SPACKMAN APPOINTED TO STATE ARCHITECTURAL BOARD

California's Governor Goodwin Knight has announced the appointment of architect Wendell Spackman, AIA, of San Francisco, to serve as a member of the California State Board of Architectural Examiners to fill the vacancy caused by the recent resignation of architect Norman Blanchard, AIA, from the State Board.

W. SPACKMAN, AIA
Named to Board Examiners

The Governor also announced that he has received the resignation of architect Floyd Rible, AIA, of Los Angeles, from membership on the Board of Architectural Examiners. Rible's resignation will become effective in August, and in conformity with past procedures in the event of a vacancy on the Board, the Governor will be asked to consider the recommendation of names submitted by the Administrative Committee of the California Council of Architects.

The names of three Southern California architects will be submitted to the Governor for consideration in filling the Rible vacancy.

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2 Convenience
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- No more sagging, flimsy screen doors which invite intruders.
- Acts as an additional protection for housewife. She may converse with outsiders through sash opening without unlocking the door.
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- Saves buying a Sash, Screen and Storm Door. Hollywood Jrs. are all 3 combined into 1 door.
- Saves on hardware, hanging and painting.
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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

PLASTICS PROGRESS—1955. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $17.50.

The technology of plastics grows rapidly and continuously. This book brings together some of the more important recent developments and contains chapters under the general headings of polymer structure and properties; expanded plastics; thermoplastics; extrusion; work study and productivity; injection moulding, patents; foundry resins and glass reinforced plastics.

The chapters are based on papers given at the British Plastics Convention, June 1955, and not only are these papers given in full, but a complete record of the discussions was made and is included.

BUILDING TECHNIQUE — For Domestic and Similar Structures. By Edwin Gunn, A.R.I.B.A. Iliffe & Sons, Ltd., Dorset House, Stamford St., London, S.E. 1. Price 21s. net.

There have been many developments in housebuilding techniques, since publication of Edwin Gunn's book "Modern Building Technique" in 1939 and the second edition published in 1945.

This is a third edition, with change of title, and text revised by Mr. John Brandon-Jones, A.A.Dip., A.R.I.B.A., vice president of the Architectural Association. Layout of the original work has been retained, with information given under headings of the various trades in order to facilitate ready reference.

FROM THE GROUND UP. By Lewis Mumford. Harvest Books, Harcourt, Brace & Co., New York. Price $1.25.

A book of observations on contemporary architecture, modern housing, highway construction, buildings and civic design compiled from a series of articles by the author which appeared in The Sky Line of "The New Yorker", under the title "The Roaring Traffic's Boom."

Although the original reviews were confined to New York, the issues they raise are universal ones; and on the understanding of these issues by the ordinary citizen, as well as by the architect, the builder, the municipal administrator, and the financier the health of our whole civilization depends. Shall we produce order or chaos? spaciousness or congestion? aesthetic delight or depression? townspaces and landscapes designed for living or cells and prison blocks for automatons?—these are some of the questions this book raises and tries, in some degree, to answer.

HISTORY OF THE CROATIAN PEOPLE. By Francis R. Preveden. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $7.50.

The eastern coast of the Adriatic offers a panorama of ancient Roman civilization continuing through centuries to this day. Ever since the seventh century the perpetuating medium is a Slavic population known under the name of Croats.

This book deals with creative genius of Croats through the Middle Ages of majestic cathedrals, public buildings, port installations and defensive structures; through the Byzantine art and civilization, modified by the Turkish invasions and conquests, and the Mohammedanism and culture of the Near East.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Sanctuary and meeting room illumination. Recently published booklet on proper balance and uniform light efficiency in all phases of sanctuary and meeting room illumination; "Church Lighting," is a comprehensive brochure covering a wide variety of lighting equipment specifically designed for church installation; illustrates with detail sketches, plus photographs; specifications sheet gives simplified engineering data. Free copy write DEPT-A&E, Pittsburgh Reflector Co., 487 Oliver Bldg., Pittsburgh 22, Pa.

Air conditioning. New 24-page book on incremental system of air conditioning for office buildings and other multi-room structures; divided into six sections covering a general description of this unique system, its advantages and economic con-

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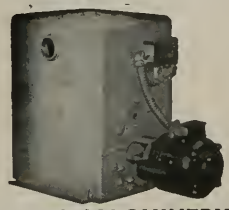

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siderations: useful amortization tables, showing the owning and operating cost per square foot per year for various initial and operating costs per ton of refrigeration; technical section includes specifications for various types and sizes; and simple survey forms on which information can be submitted to the company as a basis for budget quotations. Free copy write DEPT-A&E, Remington Air Conditioning, Auburn, New York.

New grading and bundling specifications. Western Red Cedar, graphically illustrated in attractive brochure (A.I.A. FILE No. 19-D-2); photographs of each of the four grades, brief description of the characteristics of each. New bundling rules give greater choice in desired lengths. For free copy write DEPT-A&E, Western Red Cedar Lumber Assn, 4403 White-Henry-Stuart Building, Seattle 1, Washington.

Electronic air cleaners. New brochure (A.I.A. FILE No. 30-D-3) describes electronic air cleaner Trion HEV; extremely high efficiency; for use in commercial buildings, industrial plants, laboratories and specialized applications; rated 95% efficient at 450 ft. per minute, and in excess of 90% at 500 ft. per min.; supplied in both custom-built packaged units and in field assembled units. Fre copy write DEPT-A&E, Trion, Inc., 1000 Island Ave., McKees Rocks, Pa.

Prismatic-fluted glass for fluorescent fixture lighting panels. New 6-page bulletin completely describes data; for use in large general area lighting application; brightness and distribution data, testing conditions and coefficients of utilization; also illumination level calculating sheet. For free copy write DEPT-A&E, Corning Glass Works, Lighting Sales Department, Corning, N. Y.

Window care booklet. The care and cleaning of Aluminum Windows during and after construction; new 16-page booklet prepared as a service to the building industry; details simple procedures to guard aluminum window finishes during handling, storage and installation; gives basic information on how to clean and maintain aluminum windows; how to restore the finish of windows that may have been neglected; for free copy write DEPT-A&E, The Aluminum Window Manufacturers Ass'n., 75 West Street, New York 6, N. Y.

Window file. New 16-page catalog contains comprehensive file of full and quarter scale window and screen details designed for convenient tracing; standard aluminum window dimensions and detail, specifications for awning, projected, casement and window wall units; clearly illustrates all types of hardware, remote control operators, and screening available. Free copy write DEPT-A&E, Universal Window Co., 950 Parker St, Berkeley 10, Calif.

Centrifugal dust collector. New 12 page, illustrated bulletin explains the operation and construction of the Cyclo-trell with aid of numerous drawings, cutaway views, and collection efficiency and capacity nomigraphs; tables give data for six available sizes, ranging from 3 to 20 tubes. Write for copy DEPT-A&E, Michel-Cather, Inc., 2 Park Avenue, New York 16, N. Y.

Hints for kitchen and bathroom planning. New descriptive brochure in color gives useful tips on how to plan better bathrooms and kitchens; suggested floor plans for maximum efficiency of limited space, diagrams of helpful hints for better use of these areas; emphasis is placed on importance of basic planning for desirable cabinet storage space, ample counter tops, good lighting and plenty of hot water, plus use of Hermosa glazed ceramic tile. Free copy write DEPT-A&E, Gladding, McBean & Co, 2901 Los Feliz Blvd, Los Angeles 39, California.

Religious buildings with concrete floors and roof. New booklet (AIA File No. 4-k) illustrates many samples of how precast concrete slabs lend themselves to use in church buildings, interior and exterior. Designs show use of precast concrete floors and roofs are efficient means of increasing fire safety while reducing costs. Free copy write DEPT-A&E, Flexicore Co, Inc, 1932 E. Monument Ave, Dayton 1, Ohio.

Locksets and accessories. New 4-color catalog describes "400" line locksets and accessories in both the new BelAir and Standard designs; including new trims and mounts, technical data on all locksets and trim fixtures, description of installation aids. Free copy write DEPT-A&E, Kwikset Sales & Service Co, Anaheim, California.

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quotad are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the stata. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50

Sheathing Papers—

Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10

Felt Papers—

Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb	5.05
Asphalt roofing, 15-lbs	2.70
Asphalt roofing, 30-lbs	3.70

Roofing Papers—

Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	3.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Caleveras White ..... { 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd	$7.75
⅜-inch to ¼-inch, per cu. yd	7.75
No. 6 to 0-inch, per cu. yd	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices very according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, 1/8 in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—1/8"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	25/32x2¼ $	½x2 $	⅜x2 $	¼x2 $
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
25/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

25/32 x 2¼ First Grade	$390.00
25/32 x 2¼ 2nd Grade	365.00
25/32 x 2¼ 2nd & Btr. Grade	375.00
25/32 x 2¼ 3rd Grade	240.00
25/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
25/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
1/8 in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
1/8 in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
1/8 in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
1/8 in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness (3⅜") ..... $95.50 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond, 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)

	Wholesale Raw	Wholesale Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)

	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

8-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.
¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼". @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. S. F.
Scored	
12 x 12, each	$ .17

Kraftile: Per square foot

Patio Tile—Niles Red	Small Lots	Large Lots
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00
Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)

Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)

Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)

CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson. Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)

Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)

CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)

Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., NE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)

GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)

Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)

GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)

ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.

PACIFIC COAST AGGREGATES, INC. *(11)
STSALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)

THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)

FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)

IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)

Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

DECKS—ROOF (11a)

UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)

THE BILCO COMPANY
New Haven, Conn.

Electric Doors
ROLY-DOOR SALES CO.
San Francisco, 5976 Mission St., PL 5-5089

Folding Doors
WALTER D. BATES & ASSOCIATES
San Francisco, 693 Mission St., GA 1-6971

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tucson, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)

MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)

Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)

Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)

W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Spokane: Realty Bldg., MAdison 6175
San Diego: 514 Spreckels Bldg., BEImont 4-6082
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(19)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)
KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., POrtsmouth 7-6760

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
Paint
W. P. FULLER COMPANY *(16)

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

ROOF TRUSSES (30a)
EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (31)
GLADDING, McBEAN & CO. *(3)

SHADES (31a)
SHADES, Inc.

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.65	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcAOM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	1½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%PROM				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

STUDENT DORMITORY, Presidio of Monterey, Monterey county. U.S. Army, Corps of Engineers, 180 Montgomery St., San Francisco, owner. 3-Story, concrete and masonry building; site grading paving, walks; exterior utilities, drainage, landscaping; 82,860 sq. ft. floor area in dormitory — $1,206,213. GENERAL CONTRACTOR: Stolte, Inc., 8451 San Leandro St., Oakland.

ELEMENTARY SCHOOL, Morgan Hill, Santa Clara county. Morgan Hill-Burnett Elementary School District, Morgan Hill, owner. Work comprises addition to the P. A. Walsh Elementary School; frame and stucco construction; 8-classrooms, kindergarten, music room, multi-purpose room, kitchen, toilets — $276,000. ARCHITECT: Higgins & Root, 220 Meridian Way, San Jose. GENERAL CONTRACTOR: Pacific Coats Bldrs., 1 So. Park, San Francisco.

HIGHWAY DEPT. BLDG., Phoenix, Arizona. Arizona Highway Department, Phoenix, owner. Masonry and steel frame construction; 52,000 sq. ft. floor area — $917,248. ARCHITECT: J. Harold MacDowell and Fred M. Guirey, 506 E. Camelback Rd., Phoenix, Arizona.

PAROCHIAL SCHOOL ADD'N., Arcadia, Los Angeles county. Roman Catholic Archbishop of Los Angeles, Los Angeles, owner. 4-Classroom frame, stucco and reinforced brick addition to the Annunciation Parish school; concrete slab, asphalt tile, composition and gravel roofing, plaster interior, acoustical tile, steel casement sash, gas space heaters, ceramic tile, metal toilet partitions, chalk and tack boards; 6450 sq. ft. area. ARCHITECT: Jerome C. DeHetre, 414 N. Burris, Compton. GENERAL CONTRACTOR: James I. Costello, 1912 Alta Oaks Dr., Arcadia.

WAREHOUSE AND OFFICE, Anaheim, Orange county. Anaheim Properties, Inc., Anaheim, owner. Reinforced tilt-up concrete combination office and warehouse building; steel deck, structural steel roof framing, composition and gravel roofing, concrete slab floor, acoustic tile, plaster work, air conditioning, slim line lighting, fire sprinkler system, suspended gas heaters, stone veneer, metal louvers, metal toilet partitions, chain link fencing, asphalt paving; 100,000 sq. ft. area in building — $442,503. ENGINEER: George Novikoff, 7617 Crenshaw Blvd., Los Angeles. GENERAL CONTRACTOR: Coordinated Constn Inc., 12901 Crenshaw Blvd., Hawthorne.

ENLARGE ASSEMBLY ROOM, California State Capital Annex, Sacramento. State of California, Division of Architecture, 1120 N St., Sacramento, owner. Remodel, combine 2-rooms; carpentry, mill work, patching roof, terrazzo and plaster work, concrete floor, acoustical tile, electrical, mechanical — $21,917. ARCHITECT: Anson Boyd, State Architect, Sacramento. GENERAL CONTRACTOR: Holdener Const Co., 2608 R St., Sacramento.

FRATERNITY, Phi Kappa Sigma, Berkeley, Alameda county. Phi Kappa Sigma Fraternity, California Chapter, Berkeley, onwer. Three-story frame and stucco construction—$207,900. ARCHITECT: Ratcliff & Ratcliff, 2286 Fulton St., Berkeley. GENERAL CONTRACTOR: F. P. Lathrop Const Co., 806 Hearst Ave., Berkeley.

ANDREW HILL HIGH SCHOOL, San Jose, Santa Clara county. East Side Union High School District, San Jose, owner. Frame and stucco construction; gymnasium, reinforced concrete and structural steel roof trusses; facilities for administration, classrooms, science, home making, cafeteria, library, gymnasium, toilet rooms — $870,036. ARCHITECT: Kress, Goudie, Kress, 363 Park Avenue, San Jose. GENERAL CONTRACTOR: McIlroy Const Co., 1835 Alum Rock Ave, San Jose.

OFFICE, Modesto, Stanislaus county. Barium Products Co., Ltd., Modesto, onwer. One story concrete block and frame construction, air conditioning; 5000 sq. ft. area — $74,000. ARCHITECT: Walter Wagner & Partners, Thornington Bldg., Merced. GENERAL CONTRACTOR: Hans Pearson Const., 517 Romona, Modesto.

OLD PEOPLE'S HOME, San Francisco, S. F. Ladies Protection and Relief Society, 3400 Laguna St., San Francisco, owner. Remodel of present building to add 3-stories, also basement, reinforced concrete construction; aluminum sash, elevators, 42x172 ft. — $679,000. ARCHITECT: Warren C. Perry, 260 California St., San

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Francisco. STRUCTURAL ENGINEER. Thomas F. Chas, 268 Market St., San Francisco. MECHANICAL ENGINEER: James Gayner, 870 Market St., San Francisco. GENERAL CONTRACTOR: Erbentraut & Summers, 696 Pennsylvania St., San Francisco.

BATH HOUSE, Recreation Pool, Oroville, Butte county. Feather River Recreation Park & Parkway District, 1735 Montgomery St., Oroville, owner. Construction of bath house facilities at the Oroville Recreation Pool—$45,860. ARCHITECT: Albert R. Williams, 251 Post St., San Francisco. GENERAL CONTRACTOR: Hap. Unfried, 1863 Pine St., Oroville.

HIGH SCHOOL ADD'N, Pittsburg, Contra Costa county. Pittsburg Unified School District, Pittsburg, owner. One-story reinforced concrete and frame construction; 46,000 sq. ft. floor area: consisting of facilities for an Arts & Crafts department — $122,200. ARCHITECT: Cantin, Cantin & Capell, 690 Market St., San Francisco. GENERAL CONTRACTOR: Ed Eoff Co., 1503 Nevin Ave., Richmond.

BANK, Eureka, Humboldt county. First Western Bank & Trust Co., 405 Montgomery St., San Francisco, owner. One-story, with mezzanine; frame, wood exterior, concrete vault—$115,467. ARCHITECT: Gerald Matson, 537 G St., Eureka. GENERAL CONTRACTOR: Singleton Co., 805-7th St., Eureka.

PARISH HALL & GYMNASIUM, St. John The Baptist Church, Napa. Roman Catholic Archbishop of San Francisco, 445 Church Street, San Francisco, owner. One story multi-purpose building; part 2-story, concrete block and frame construction, composition roofing; comprises Parish Hall and Gymnasium — $124,600. ARCHITECT: Buckley & Houwelling, 166 Geary St., San Francisco. GENERAL CONTRACTOR: J. H. Vienop, 2400 Oak Street, Napa.

EDUCATION CENTER, Bakersfield, Kern county. Bakersfield City School District, Bakersfield, owner. Reinforced concrete block, structural steel frame, steel sash, acoustical tile, wood movable partitions, metal toilet partitions, laminated plaster, rolling steel doors, metal cabinets, air conditioning, automatic sprinkler system — $811, 000. ARCHITECT: Robert N. Eddy, 2901 H St., Bakersfield. GENERAL CONTRACTOR: Fred S. Macomber, 8818 Melrose Ave., Los Angeles.

GIRLS GYM, High School, Ceres, Stanislaus county. Ceres Union High School District, Ceres, owner. Rehabilitation of girls gymnasium, interior and exterior remodel, from auditorium and gymnasium—$135,900. ARCHITECT: Mitchell Van Bourg, Hotel Claremont, Berkeley. GENERAL CONTRACTOR: Acme Const. Co., 827-13th Street, Modesto.

SHOPPING CENTER, Napa. P. Sealer, Napa, owner. 1-Story, concrete block, structural steel frame, wood roof, concrete block, structural steel frame, wood roof, concrete floors, plate glass front; 100x150 ft. ARCHITECT: Robert B. Liles, 340 Pine St , San Francisco. GENERAL CONTRACTOR: W. S. Bickford, 2116 Lone Oak Ave., Napa.

BRANCH BANK BLDG, Richmond, Contra Costa county, Bank of America, 300 Montgomery St., San Francisco, owner. 1-Story with mezzanine, concrete block and frame construction—$120,351. GENERAL CONTRACTOR: Carl Overaa Const Co., 520-16th St., Richmond.

OFFICE & WAREHOUSE, Millsdale Industrial Tract, Burlingame, San Mateo county. Kellog Switchboard & Supply Co., owner. 1-Story reinforced concrete tilt-up construction, wood roof; 12,000 sq. ft. area. ARCHITECT: J. Francis Ward, 251 Leidesdorff St, San Francisco. GENERAL CONTRACTOR: Williams & Burrows, 500 Harbor Blvd., Belmont.

ELEMENTARY SCHOOL, Fort Bragg, Mendocino county. Fort Bragg Union High School District, Fort Bragg, owner. New Danna Gray School, wood and structural steel frame construction; administration offices, 15-classrooms, specialty room, library, teachers room, kitchen, boiler room; also addition to Redwood School—$566,908. ARCHITECT: Schmidts, Hardman & Wong, 1320 University Ave, Berkeley. GENERAL CONTRACTOR: Paul V. Wright & Ralph Palmberg, (JtVt) 1826 Morley Way, Santa Rosa.

ELKS CLUB ADD'N, Modesto, Stanislaus county. B.P.O. Elks Lodge, Modesto, owner. Construction of a new building in addition to present one; concrete block, laminated wood arches, maple floors — $200,000. ARCHITECT: George N. Hilburn 712-17th St, Modesto. GENERAL CONTRACTOR: Acme Const Co., 827-13th St, Modesto.

DENTAL BLDG, Piedmont, Alameda county. Drs. William Helfrich & Richard Railbach, Oakland, owners. Frame and stucco construction; 3-suites of offices—$60,000. ARCHITECT: Irwin M. Johnson, 449 MacArthur Blvd, Oakland. GENERAL CONTRACTOR: Malloch Const Co, 1051-19th Ave, Oakland.

COUNTY UTILITIES BLDG., Bakersfield, Kern county. Board of Supervisors of Kern County, Bakersfield, owner. Construction of a new County Utilities Building in the Civic Center — $627,979. ARCHITECT: Wright, Metcalf & Parsons, 2323 E. St., Bakersfield. GENERAL CONTRACTOR: Fred S. Macomber, 8818 Melrose Ave., Los Angeles.

SIERRA VIEW ELEMENTARY SCHOOL, Chico, Butte county. Chico Unified School District, Chico, owner. Frame and stucco construction of 8-classrooms, toilet rooms — $217,060. ARCHITECT: Lawrence G. Thomsen, 125 W. 3rd St., Chico. GENERAL CONTRACTOR: Hignall & Strange, 1372 Longfellow Ave., Chico.

COUNTRY CLUB SHOPPING CENTER, North Sacramento, Sacramento county. Country Club Centre, Inc., North Sacramento, owner. Addition to Shopping Center, 1-story building frame and stucco construction; 100x200 ft. PLANS: William B. Daniel, Associates, 988 Market St., San Francisco. GENERAL CONTRACTOR: Erickson Constn, 1119 E. Bassettlaw Ave., North Sacramento.

BANK, Bakersfield, Kern county. First Western Bank & Trust Co., San Francisco, owner. 1-Story brick walls, asphalt tile, terrazzo and concrete floors, steel roof trusses, acoustical tile ceilings, air conditioning; 7580 sq. ft. area — $191,000. ARCHITECT: Robert N. Eddy, 2901 H. St., Bakersfield. GENERAL CONTRACTOR: David M. Biggar, 100 Oak St., Bakersfield.

HOOVER JR. HIGH SCHOOL ADD'N., Merced. Merced Elementary School District, Merced, owner. Frame and stucco construction; 7-classrooms — $98,328. ARCHITECT: Walter Wagner & Partners, Thornington Bldg., Merced. GENERAL CONTRACTOR: V. L. Fitchett, P. O. Box 1495, Merced.

ELECTRONICS SHOP & AUTO SHOP, Yuba Jr. College, Marysville, Yuba county. Yuba County Jr. College District, Marysville, owner. Frame and stucco, reinforced concrete and structural steel building; 9000 sq. ft. area—$119,941. ARCHITECT: Charles F. Dean, 1521 I St., Sacramento. GENERAL CONTRACTOR: Jay Bailey Constn, P. O. Box 148, Woodland.

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IN THE NEWS

POMONA MEDICAL ARTS CENTER

Construction has started on the Pomona Medical Arts Center which will feature modern patient conveniences and laboratory facilities, including X-ray, complete laboratory procedures for studies and diagnosis, and a professional pharmacy.

Designed by architects Amos W. Randall and Don L. Yinger, Associate of Pomona, California, the center will consist of five separate buildings, providing a total of 15 medical and dental suites. Each suite will include space for reception, examination and treatment. Total area is 17,000 sq. ft. Cost of the project is $400,000.

ARCHITECT SELECTED

Clifton Holser, AIA Architect has been commissioned by the City Council of Santa Maria, to draft plans and specifications for construction of a new Fire Station to replace the facility which burned recently.

The new building will occupy a site at the southeast corner of McClelland and Cook streets.

CALIFORNIA FIRM TO MAKE HIGH TEMPERATURE CERAMICS

The formation of Thermo Materials, Inc., a new California corporation specializing in the development and production of precision high temperature industrial ceramics, has been announced.

Under the joint ownership of Gladding, McBean and Company of San Francisco and Los Angeles; Provident Securities Company, San Francisco; and the Frenchtown Porcelain Company of Trenton, New Jersey, the new plant facilities will occupy a 2½ acre site near Menlo Park, California, with executive offices at 1275 Harrison Street, San Francisco.

Thermo Materials will manufacture and distribute high temperature ceramic and cement items for the electronic and fabricated metal industries as well as ferrite components capable of withstanding high temperature environments to meet the increasing demand in the mechanical, electrical, chemical and nuclear industries.

Officers of the new firm include Emmett G. Solomon, President (vice-president Provident Securities Co.); Emo D. Porro, Executive Vice-president and general manager (formerly Kaiser Industries); Fred B. Ortman, Secretary (Chm. Board, Gladding, McBean and Co.); and D. J. Murphy, Treasurer (Vice-president Provident Securities Co.). Members of the Board of Directors include: C. W. Planje, president, Gladding, McBean & Co., H. Sinclair Kerr, president and Harland W. Hoisington, director of the Frenchtown Porcelain Company.

CHURCH BLDG

The architectural firm of Strange & Inslee, and Claude L. Senefeld, associated architect, 3142 Wilshire Blvd, Los Angeles, has completed plans for construction of a wood siding and stucco church building to be built in Granada Hills for the Presbyterian Church of Los Angeles.

The new building will be 103x105 ft.; composition and crushed rock roofing; oak, asphalt tile and concrete floors; acoustical tile ceiling and exposed beams, central heating and ventilating, steel casement and aluminum sliding sash, metal toilet partitions, kitchen, built-in ranges and ovens, wood louvers, asphalt concrete paving.

FIRE STATION

Architects Fingado & Kern of 2910 Telegraph Ave, Oakland, have completed drawings for construction of new Fire Station to be built at 5th and I streets in Crescent City for the City of Crescent City.

The new facilities will be 1- and part 2-story, frame and asbestos board exterior construction.

INTER-COMMUNITY MEMORIAL HOSPITAL

The architectural firm of Bolton White & Jack Hermann, 75 Castle Street, San Francisco, has started drawings for con-

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struction of a one story, 30 bed, Inter-Community Hospital to be built in Fairfield for the Central Solano Community Hospital Foundation.

The new hospital will be of masonry and frame construction with metal sash. Estimated cost of the project is $475,000.

WAREHOUSE BUILDING

Albert C. Martin & Associates, Architect and Engineers, 333 S. Beaudry St., Los Angeles, is preparing plans and specifications for construction of a warehouse and office building in Tucson, Arizona, for the Brunswig Drug Company.

The new facilities will be 173 x 193 feet; masonry and steel construction, concrete work, metal roofing, slab floor, metal sash, metal doors, air conditioning, electrical work. Estimated cost of the project is $300,000.

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WESTERN STRUCTURAL TILE INSTITUTE STARTS PROGRAM

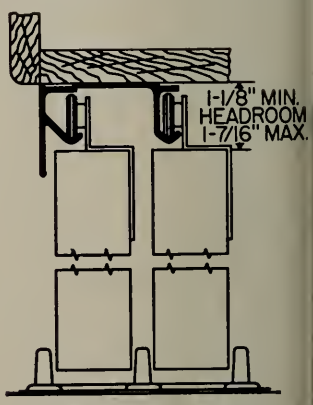
The Western Structural Tile Institute recently inaugurated an advertising and educational program on Glazed Structural Units and has selected ARCHITECT & ENGINEER magazine, Architectural Record, and Pacific Architect & Builder, to carry the story to the construction industry.

The campaign consists of a combination of one-half and one-third pages of informative copy to be published during the last half of 1956. One of the advertisements will feature a survey of school officials on their experience with glazed Structural Units in school construction, another advertisement will feature reactions of the Brewmaster of one of the West's largest breweries toward his glazed structural tile installation.

Kraftile Company of Niles, California, is a member of the Institute as is the Washington Brick & Tile Company of Seattle.

FACIA TRACK SETS BY LAWRENCE BROS.

Three new Facia Track sets have been added to the Lawrence line of Sliding Door Hardware; designed for fast, easy installation, three sizes ¾", 1⅜" and 1¾" By-Passing Doors.



Each packaged set is complete, containing all necessary track, hangers, pulls, door guides, door stops and screws. All hard

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ware is mounted before the door is hung.

The track is extruded aluminum with anodized satin finish; integral facia plate may be installed natural or primed and painted to match decorative detail. Another feature assuring smooth, trouble free sliding door operation is new steel plate door guide with nylon guide posts. For further information inquire of Lawrence Bros., Inc., Sterling, Ill.

ARCHITECT SELECTED

Architect C. A. Caulkins, Jr., Rosenberg Bldg., Santa Rosa, has been selected by the Cotati Elementary School District board to draft plans for construction of a new Elementary School building to be built in Cotati.

The new facilities, of frame and stucco construction, will provide administration offices, 6-classrooms, and toilet rooms.

RADIO TRANSMITTER AND OFFICE BLDG

The architectural firm of Davis & Ferguson, 14423½ Sylvan St, Van Nuys, is completing plans and specifications for construction of a masonry and stone veneer radio transmitter and office building in Sepulveda for Radio Station KGIL.

The new building will contain 4,000 sq. ft. of area; composition roof, concrete slab, metal sash, toilet rooms, asphalt-concrete paving.

ELECTRONIC PLANT

Architects Green & McGhee, Jesse W. Green, architect, 3907 Duquesne Ave, Culver City, have completed plans for construction of a reinforced brick electronics plant in Culver City for Rutherford Electronics Co.

The new building will contain 3700 sq. ft. of area; composition roofing, concrete slab and asphalt tile floors, acoustic tile ceilings, plumbing, air conditioning, rolling steel or accordian doors, glass block, and asphalt paving.

BROADCASTING STATION

Architect William D. Concolino, 588 Huston St, Monterey, is completing drawings for construction of a 2,000 sq. ft. area addition to broadcasting station KSBW in Salinas.

The addition will be frame and stucco construction.

STRUCTURAL CLAY PRODUCTS RESEARCH FOUNDATION

The structural clay products industry has opened the doors of the Structural Clay Products Research Foundation dedicated to the industry's multi-million dollar research program.

The $500,000 research center is located on a rolling 16-acre site along the Fox River just south of Geneva, Illinois, and comprises a two-unit building of cavity wall construction. Research projects include work on lightweight clay products, mortar, facing tile, brick packaging, atomic blast resistance, thermal research, preassembled clay masonry walls and other new products.

The Center is under the direction of Robert B. Taylor and a staff of twenty-seven clay products scientists and technicians.

NEW MAGNETIC CABINET CATCH ANNOUNCED BY AJAX

A new Magnetic Cabinet Catch which gives balanced pull in both planes has just been announced by Ajax Hardware Sales Company of Los Angeles.

The Catch automatically adjusts to 6-degree error in both vertical and horizontal plane and maintains complete contact with strike plate up to point of release; balanced power is achieved by means of an additional phosphor bronze point in the front center which enables the Catch to maintain an 11 to 15 lbs. pull until the actual instant of release.

Complete information from Ajax Hardware Sales Co, 4355 Valley Blvd., Los Angeles.

RUDOLPH A. SCHATZEL IS ELECTED ASTM PRESIDENT

Rudolph A. Schatzel, vice-president and Director of Engineering for the Rome Cable Corp., Rome, N.Y., was elected president of the American Society for Testing Materials at the 59th Annual Meeting of the Society recently held in Atlantic City.

Associated with the wire industry since 1924, Schatzel has distinguished himself in research and development work on electri-

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cal cable insulations, particularly rubber and plastics. In ASTM he has been particularly active in Committee D-11 on Rubber and Rubber-like Materials where he holds memberships on several subcommittees and was for many years Chairman of Subcommittee V on Insulated Wire and Cable. He also serves on Committee B-1 on Wires for Electrical Conductors.

Other officers elected to serve with Schatzel include: Kenneth B. Woods, Head, School of Engineering and Director, Joint Research Highway Project, Purdue University, Lafayette, Ind., vice-president; Miles N. Clair, president, The Thompson & Lichtner Co., Inc., Brookline, Mass.; Charles R. Stock, Senior Group Leader, Physical Measurements Laboratories, American Cyanamid Co., Stamford, Conn.; R. R. Litehiser, Engineers of Tests, Ohio State Highway Testing Laboratory, O.S.U. Campus, Columbus, Ohio; Howard C. Cross, Assistant Technical Coordination Director, Battelle Memorial Institute, Columbus, Ohio, and George H. Harnden, Consultant, Materials and Processes, Engineering Standards Service, General Electric Co., Schenectady, N.Y., all directors.

PRODUCERS COUNCIL ANNUAL MEETING

The 35th Annual Fall Meeting and Chapter Presidents' Conference of the Producers Council, Inc., will be held September 25-26 in the Wade Park Manor Hotel, Cleveland, Ohio, according to an announcement by John C. Cowley, president of the Northern California Chapter.

BRANCH COUNTY OFFICE BLDG.

Architects Beland & Gianelli of 1903-A Sonoma Avenue, Vallejo, are preparing plans and specifications for construction of a 20,000 sq. ft. County Office building to be built in the Civic Center of Pittsburg.

The new building will house facilities of court rooms, and general offices; will be of tilt-up concrete construction, with some brick veneer.

GREYHOUND BUS DEPOT

The architectural firm of Skidmore, Owings & Merrill, 1 Montgomery street, San Francisco, has completed drawings for construction of a new 1-story Greyhound Bus Depot to be built in San Jose for the Pacific Greyhound Lines.

The facilities housed in a 1-story 115x245 ft area, will provide a waiting room, coffee shop, administrative offices and the building will be of reinforced concrete construction. Estimated cost is $600,000.

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Editor

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★

COVER PICTURE

ST. JOSEPH'S COLLEGE

Mt. View, California

New Chapel, classroom and dormitory wing of the St. Joseph's College designed by the architectural firm of Blanchard & Maher, San Francisco.

[See page 8 for additional details.]

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135 — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco.

. EDITORIAL NOTES .

POLITICAL ARCHITECTURE

Deeply concerned with what appears to be avoidable delays in the construction of public works projects, members of the California State Legislature, following state-wide hearings by a Special Interim Committee appointed to make a thorough study of the situation, passed what is known as Senate Constitutional Amendment No. 6, and placed the amendment on the November General Election ballot for ratification by the voters of the State as Proposition No. 10.

The Proposition establishes by statute the right of State agencies to employ private architects and engineers on a contractural basis, when such contracts are deemed to be in the best interest of the public and public works projects.

There is certainly nothing wrong with this proposed legislation!

It provides a much needed expediency whereby public works projects may be speeded to a satisfactory conclusion; it will enable many projects to get under way which may otherwise be indefinitely delayed, and even abandoned, due to the inability of State agencies to do the necessary paper-work; but, above all other considerations Senate Constitutional Amendment No. 6 furthers the basic principle of individual and free enterprise, as it gives the private practitioner an opportunity to use his ability, special talent, and technical knowledge in government as well as private construction.

This is contrary to today's governmental trends in that it divests governmental career planners of using vast public works programs as a vehicle for building new and bigger jobs, and opens the door to take bureau control away from the "political" and place it in the hands of private, or professional, enterprise. Opposition to the passage of Proposition No. 10 will be great and will stem from many strange sources as election day nears.

Unfortunately, neither the architectural, or engineering profession, is basically equipped with experience or funds to carry out an energetic public education program necessary to cope with strong opposition by those who guide the destiny of government competition with private industry.

* * *

FREEDOM SELLS ITSELF

Periodically, a foreigner upon completing a tour of the United States will remark that he has gotten an entirely different perspective of America than that given him originally by some American who had come to his country. "You Americans," the comment is heard, "always seem to be apologizing for your homeland."

This summer, as usual, many vacationing Americans will be off to all corners of the earth. They will be restricted to certain weight maximums for their luggage, particularly if they travel by air. Naturally, they'll want to be selective and pack only the necessities. However, there are no weight restrictions on one's intellectual luggage, so there is little excuse for leaving at home a few select and admirable facts about your country, your community and your town.

Worth remembering is the fact that property ownership in America is widely diffused—over eight million people own shares of American business companies. Over 22 million families own their own homes, compared with seven million.40 years ago.

Working men and women in America are living a good life. They have higher wages, shorter hours, greater job security and retirement plans—in 1916 the average factory wage, in 1955 dollars, was about $32 for a 48-hour week. Today it is $76 for a 41-hour week.

Educational facilities are greatly expanded even in terms of higher education. Today 37 per cent of young people between the ages of 18 and 21 are enrolled in educational institutions as against 8 per cent in 1920.

So! America isn't so bad when you take a look at it and prepare to tell your problems to the poor people of Paris, and elsewhere.

* * *

THE NEW HIGHWAY PROGRAM

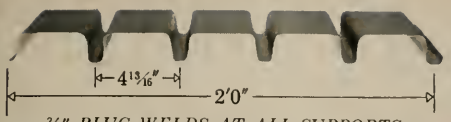
It's not too early for your community to start some homework on the local impact of the new national highway program.

While in one sense the program is national, its greatest impact will be local, and population centers will be most effected. Of course, new or improved highways will bring a host of benefits, but there also will be many problems which will rest with communities.

Central cities, for example, will feel an increased pull from the suburbs and suburban communities will find themselves faced with new and even staggering requirements for sewer and water facilities, schools, streets and parking.

Business men and civic leaders should meet with community officials and bring themselves up-to-date on new street and highway plans. Once this is done, civic groups should prepare to help guide local development of the new highway program along lines most likely to benefit all sectors of the community, and every step should be taken to see that the general public is kept fully informed on progress of street and highway plans.

United action is the best way to cope with the many problems certain to arise as the highway program unfolds.



3/4" PLUG WELDS AT ALL SUPPORTS

Notice the Widman section is distinguished by a fifth rib. The extra rib increases the section modulus. Widman makes 18 and 20 gauge decking of high-quality United States Steel sheets.

TYPICAL SIDELAP

Steel roof decking saves framing and insulation costs

Here's a perspective on 46,600 square feet of roof decking, fabricated and recently erected by George D. Widman, Inc., of Gardena, California. Formed from USS steel coils, the two-foot-wide sections were laid in 22 and 28 foot lengths. Steel decking (20 gauge) was selected for the job to allow greater load-bearing capacity and important construction economies.

These 5-rib steel sections have the required strength to span greater distances and thus eliminate considerable amounts of framing. And the one-inch space between the ribs (narrower than usual) reduces thickness of insulation over open spaces. The incomparable strength of steel makes it ideal for roof decking. To obtain the same strength from other materials, weight would have to be greatly increased . . . and with it the cost.

If you would like additional information and specifications on the use of steel roof decking both for commercial or *residential* construction, we will be happy to put you in touch with United States Steel customers here in the West who fabricate roof decking.

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NEWS and COMMENT ON ART

MUNICIPAL ART GALLERY BARNSDALL PARK LA

A survey of architecture done in California between 1900 and 1930 by creative designers who have had a profound influence on contemporary architecture will be displayed at the Municipal Art Gallery in Barnsdall Park, Los Angeles, during September.

Under the title "Roos of California Contemporary Architecture," the display centers attention on the contributions of Irving Gill, Greene & Greene, Bernard Maybeck, Ruchard Neutra, R. M. Schindler and Frank Lloyd Wright.

Sponsored by the Los Angeles Municipal Arts Department, the exhibit represents scores of photomurals, models, original drawings and explanatory text to show the way in which these men's fresh approach to California living has made a lasting impression on the homes, stores, offices and factories of today.

The exhibit is designed as a traveling one which may later be shown by galleries and architectural schools throughout the country.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has arranged a number of special exhibitions and events for September, of particular interest in connection with resumption of Fall

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park San Francisco

THE TRIUMPH OF FLORA

By GIOVANNI BATTISTA TIEPOLO **Italian School of Venice, 1696-1770**

From the Samuel H. Kress Collection

activities following the summer vacation months. Among those scheduled are:

EXHIBITIONS: 20th Annual Watercolor Exhibition of the San Francisco Art Association; the Reginald Marsh Memorial Exhibition, organized by the Whitney Museum of American Art, New York City; Dance—San Francisco, an exhibition organized by the Contemporary Dancers Foundation; Landscape Architecture Today—An Introduction, sponsored by the California Redwood Association; Armando Reveron—Retrospective; and a number of special items from the Museum's permanent collection.

EVENTS: Lecture Tours, based upon current exhibitions, are conducted each Sunday afternoon at 3 o'clock, and on each Wednesday evening at 8:30 a Staff member will conduct a gallery tour of current exhibitions. Classes in Adventures in Drawing and Painting will be resumed beginning Friday, September 21, 7:30 p.m. The program Studio-Art for the Layman, will commence in October. The Children's Saturday Morning Art Classes, 10 to 11, ages 6-14, will be resumed September 22, under the direction of Julius Wasserstein.

The Museum is open daily.

MODERN DANCE LECTURE AT SF ART MUSEUM

In connection with the exhibition, Dance: San Francisco, currently being shown at the San Francisco Museum of Art, War Memorial Building, Civic Center, a lecture-demonstration will be given on Wednesday evening, September 26th at 8:30, by J. Marks, general director and choreographer of the Contemporary Dancers Foundation.

He will discuss and amplify aspects of the photographic exhibition. Soloists of the Contemporary Dancers company will demonstrate principles of the modern dance, and a motion picture version of "A Season in Hell," upon which the current exhibition is based, will be shown.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is presenting a group of special exhibits and events for September arranged to coincide with renewed interest and activity in Art following the summer vacations.

EXHIBITIONS: The Italian Festival of San Francisco, offers Photographs of Venetian Villas, and Contemporary Italian Painting and Sculpture; a group of Painting and Drawings by Morris Graves; Paintings by George McNeil; Sculpture by David Tolerton; Village Life in Comalapa; Paintings by Andres Curuchich; Paintings, Drawings, Prints by June Wayne; and an exhibition by the California Society of Etchers.

EVENTS: Classes in Art Enjoyment for adults and children will be resumed during September. Adult activities will include Exercises in Oil Painting, a weekly series of elementary experiments in painting intended especially for those who have taken "Painting For Pleasure. . . . Exercises in Perception," will start Saturday morning, September 8 at 10:30, and beginning September 12, will be repeated each Wednesday afternoon at 2 o'clock. The Painting Workshop for Amateurs, painting from the model and still life motifs for the practice of observation and appreciation will be held Saturday and Thursday afternoons from 1:30 to 4:00; Seminars in the History of Art, informal discussions illustrated by lantern slides, reproductions and original works, will be given each Thursday morning 10:30 to 11:30; the classes for children, conducted by Miriam Lindstrom, will include: Picture Making, Saturday mornings 10:15 to 4:30; and the Art Club, each Thursday afternoon at 3:30 to 4:30. All classes are free.

Museum hours are: 10:00 a.m. to 5 p.m.

WINNERS IN WATERCOLOR EXHIBITION ANNOUNCED

The 20th Annual Watercolor Exhibition of the San Francisco Art Association, currently being shown at the San Francisco Museum of Art, War Memorial Building, Civic Center, represents an exhibition of 57 items selected from an entry list of more than 359.

Prize winners include: Henry Rasmusen, "Accents," San Francisco Art Association Purchase Prize; Edna Stoddart, "No Season Waits," San Francisco Art Association Prize; John Haley, "Dance," San Francisco Art Association Artist's Council Prize; Noriko Yamamoto, "Space," San Francisco Art Association Artist's Council Prize; and Nancy Thompson Genn, "Black, Brown, and Grey, 1955," Honorable Mention.

This year's Jury were: Nathan Oliveria, William Morehouse and William Brown.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., has announced a number of special exhibits and Museum activities for September, including:

EXHIBITS: American Paintings from the Museum's Collections; Sport in Art, an exhibition sponsored by the magazine Sports Illustrated, comprising

(See page 23)

NEW TECHNIQUE USES STUD WELDING AND COIL TIES

TO SECURE CONCRETE FORMS

By J. E. SMITH

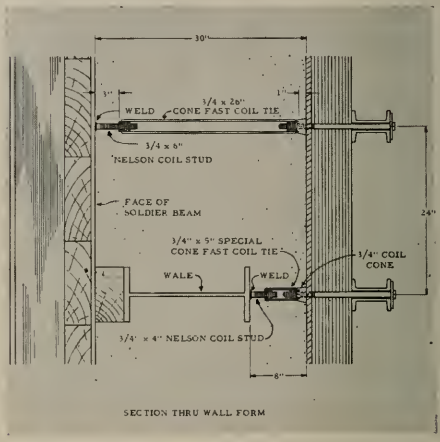
Assistant Project Manager,

Webb & Knapp Construction Corporation

A new technique for securing concrete forms, involving a combination of end welded studs and coil form ties, was employed by Webb & Knapp Construction Corp. during construction of the basement walls for the new Court House Square building in Denver, Colorado. It was probably the simplest, most economical, and safest fastening method we could have devised and turned a potentially difficult task into a fairly easy one.

The first step in the procedure was to end weld large diameter studs to the vertical soldier beams of the basement cofferdam walls with a heavy-duty stud welding gun. Two battery units hooked up in parallel were used as the power source. The studs were ¾-inch in diameter and 6 inches long, with 5½ inches of broad threads sized to fit the coils of the form ties.

On the extreme upper lift, where a double form was required, the form was built in place with the sheathing boards fitted over the studs. Coil form ties were then threaded to the studs and the prefabricated inside form was erected. On the lower three lifts, concrete was placed directly against the cofferdam wall, eliminating the outside form. Prefabricated panels consisted of 4-foot by 10-foot ¾-inch plyform, with 2-inch by 6-inch studs 12 inches on centers. Walers consister of 6-inch double channel iron, back to back. Forms were secured by running ¾-inch lag bolts through the waler and threading into the free end of the coil form tie.



SECTION THRU WALL FORM

Studs were spaced 6 feet center to center on the horizontal plan and 2 feet on centers vertically. Theoretical load on each stud and tie was 12,000 pounds.

The two battery units supplying the power were mounted side by side on a single timber platform. Lifting pads were provided and the unit was shifted by crane from one location to another. Battery units were maintained at peak by running a 110-volt A.C. line to the charger on the unit.

ENGINEERING PROBLEMS

CALIFORNIA'S HIGHWAY PROGRAM

STEPPED-UP SCHEDULES PRODUCE ENGINEER SHORTAGES

In the past ten years, California has quadrupled its highway construction program and now stands ready to turn out plans, specifications and miles of modern highway at an even faster rate if the funds are made available—all in the face of a nationwide shortage of more than 4,000 highway engineers.

How, despite that handicap, has the State been able to complete 1,000 miles of multilane divided highways in ten years, with another 300 now under construction and another 200 miles to be advertised for bids this year?

The answer, according to State Highway Engineer G. T. McCoy, is a combination of modern management and technical methods. Developed and applied more intensively in recent years under the spur of a vastly increased highway construction program, these methods are effecting huge savings in three precious commodities — time, money and professional manpower.

New Techniques

The new techniques and devices range from greater use of subprofessional aids and technicians to aerial

photographs from which location maps and even grading plans can be quickly produced; from new, simplified technical manuals to the lastest electronic computing machines which calculate earthwork quantities and solve complex geometric problems in a fraction of the time formerly needed.

McCoy predicts that the eventual full use of these and other known methods will double engineering output. In particular, the application of photogrammetry and automation techniques, in combination, is regarded as the greatest advance in the science of highway engineering in many years.

Contractors Help

At the same time, the highway contractors have more than kept pace, with streamlined operations of their own. Ever-larger earth-moving machines change the face of a landscape in a matter of days; moving assembly-lines or "paving trains" can already place up to three-quarters of a mile of 12-foot concrete lane, eight inches thick, in one eight-hour day; batching plants serve up just the right mixture of rock, sand and asphalt at the touch of a button. Single contracts run as high as $6,000,000 or even more.

And competition is as keen as ever, assuring the motorist the most highway for his tax dollar. On a recent typical freeway job, there were nine bidders, with a difference of only $154,000 between the lowest bid of $1,975,000 and the fifth lowest.

California's transportation growing pains, always severe, became acutely critical after World War II, and are still intense. From less than 3,000,000 motor vehicles in 1940, the State's traffic load rose to more than 6,000,000 by 1955 and is now approaching 7,000,000.

Financing

Highway construction, financed on a depression-born basis before World War II, came to a standstill during the war. The financing picture improved in 1947 with the Collier-Burns Act, and again in 1953 when the continued growth of traffic made still faster highway construction a matter of life and death to Californians—in the literal as well as the economic sense.

Noticeable progress is being made. California is now spending about $250,000,000 a year for highway construction purposes—admittedly not enough to provide the safe and adequate highways the State desperately needs, but enough to keep the situation from getting worse—and could effectively spend more. Where are the engineers to plan and build these modern trafficways, including many complex metropolitan freeways?

Engineers Needed

Far too few are coming out of the engineering colleges. The various state highway departments say that they need 4,000 more engineers right now. But the entire nation's class of 1954 in civil engineering numbered less than 3,600; probably no more than 700 of them went into highway engineering and a third of these did not stay there long—quite understandable in the light of the higher salary and other inducements offered them in other fields.

Since there were not enough engineers to be had, the California Division of Highways, like other such agencies, stepped up its quest for ways to make more efficient use of what engineers it had and could get. Hand in hand with this effort, the constant struggle to stretch the highway tax dollar a little further, particularly in the face of rising costs, was intensified.

More Manpower

There are six principal fields in which ways have been found to get highways planned and built in California with a saving in time, money and engineering manpower:

1. Photogrammetry, or measurements using aerial photographs, is already saving the time and effort of an estimated 200 engineers a year. In one section of California, two ground survey crews plus an aerial mapping contractor produced 75 miles of preliminary surveys that would otherwise have required seven additional ground crews for the field work alone. Remarkably accurate maps can be plotted and drawn from aerial pictures, permitting even the drawing of detailed design plans.

The Division of Highways estimates the cost of obtaining data by ground survey methods at an average of $3,500 a mile for a strip of terrain 400 feet wide. By aerial photography, it averages $1,000 a mile for a strip 1,200 feet wide.

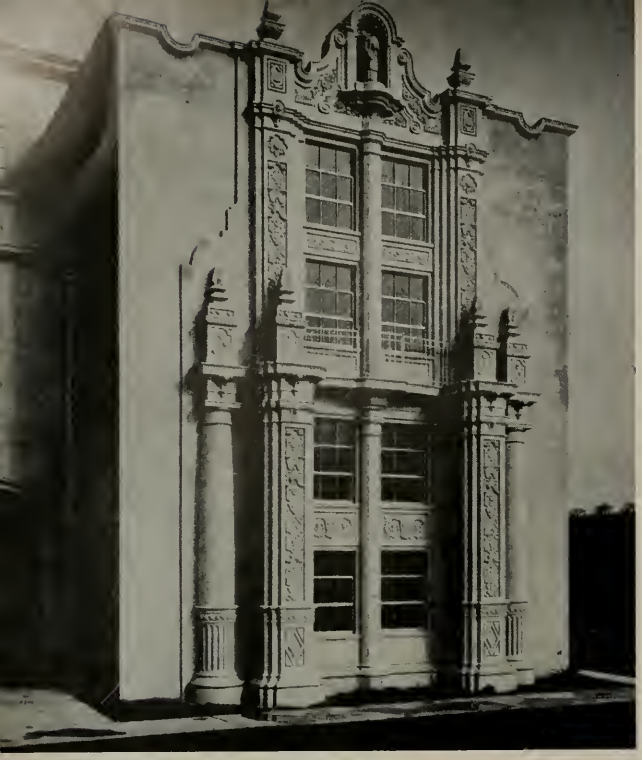
2. "Automation," or, more accurately, the use of electronic computing equipment to make and check engineering calculations which are time-consuming, tedious and costly when done manually by engineers in the drafting room. Tabulating machines have long been useful and economical in computing and analyzing traffic statistics, cost data and other figures, but now they have also been put to work on two types of calculations used directly in highway design.

One type is the calculation of traverses, or survey lines. The engineer in the drafting room instead of laboriously figuring and then checking the unknown bearings, distances or areas for a parcel of land, now sends in the available data to the Headquarters office in Sacramento. There the material is punched onto cards, fed into the machines, and the solutions mailed back. To complete 1,000 to 3,000 traverse courses daily in this fashion takes 12 to 24 hours of key punch and tabulating machine operation time, on the part of technicians and operators. It would take five to seven times as long for the same work to be done by engineers using manual methods.

Machines Help

In addition to saving on engineers, the machine process saves an estimated $2,000 a month in money—

(See page 22)



South Transept Windows of Chapel.

NEW WING
and CHAPEL

ST. JOSEPH'S COLLEGE

MOUNTAIN VIEW,
CALIFORNIA

BLANCHARD & MAHER
Architects

HUBER & KNAPIK
Structural Engineers

KELLER & GANNON
Mechanical-Electrical Engineers

BARRETT CONSTRUCTION CO.
Contractors

NEW CHAPEL shown in center; classrooms and dormitory wings.

By NORMAN K. BLANCHARD, F.A.I.A.

The first increment of St. Joseph's Seminary was completed and occupied in the fall of 1924. It was designed to house approximately 260 students, a faculty of 16 professors, convent and chapel for 25 Sisters, administrative offices, classrooms, study halls, library, kitchen and dining facilities for the staff and students; locker and shower rooms and housing for the maintenance staff. A tower 165 feet high dominates the four story structure which is Spanish baroque in character.

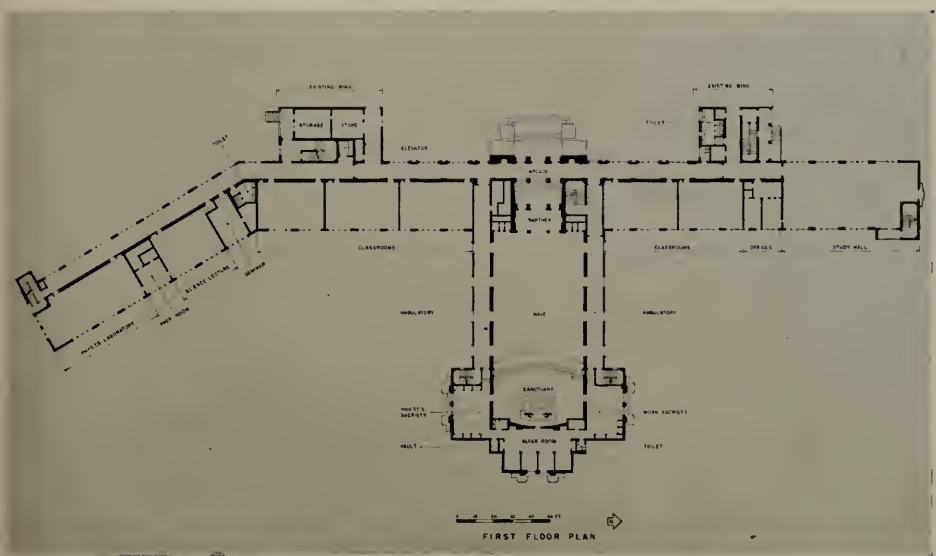
The original increment did not include the east wing, leaving the central court open on this exposure.

The work was completed under the direction of Archbishop Hanna and was made necessary by increasing demand on St. Patrick's Seminary at Menlo Park which, in two short decades has become too small to meet the growing need for parish priests in our coastal states.

In 1954, thirty years later, St. Joseph's Seminary could no longer cope with its increased enrollment

INTERIOR VIEW of the Main Corridor of the Chapel entrance, showing combination use of wood panel ceiling, tile floors and decorative tile wainscoting.

FIRST FLOOR PLAN . . .



and Archbishop Mitty ordered the completion of the structure by the addition of the east wing; an addition approaching the size of the original main structure. Complete rehabilitation and modernization of the existing structure was also necessary. For thirty years the existing structure, nestled in the wooded foothills of Kings Mountain, has dominated the valley below it, overlooking Mountain View, Los Altos and the Bay beyond. Not wishing to change the character of the new addition, as no further expansion of this Seminary will be made in future years, Archbishop Mitty decreed that the architectural design follow as closely as possible the character of the existing structure.

The new four story wing houses 185 students on the top two floors, in single rooms of modern college design, with two professor's suites containing study, bedroom and bath on each floor.

The first floor is devoted to classrooms, study hall and chapel. The ground floor accommodates an auditorium-gymnasium, shower and locker rooms, garage,

MARBLE mosaic floor of the altar area with inlaid first level design; a mosaic mural flanks the marble and hardwood chancel.

NAVE of Chapel with marble floor aisle; hardwood pews, wainscoting and ceiling, and special lighting effect.

work shops for students and maintenance crews and general storage areas.

Because of the fact that this junior seminary is primarily interested in the training and education of young men aspiring to the priesthood, a rich background of religious symbolism has been incorporated in both the interior and exterior design of the structure.

The main entrance to the chapel is on the court facade readily accessible to the students congregating there between classes and before and after meals; the loggia surrounding the court giving covered access during inclement weather and connecting the classrooms, dining and recreational activities with the chapel. Flanking the chapel entrance along the east loggia are six statues of the saints most closely related to the teaching orders. The niches and statues of the saints were executed by sculptor Malmquist as was the Pieta group at the left of the entrance.

The chapel interior is floored with marble. Panels

(See page 28)

DETAIL OF INTARSIA (at right above). This is a mosaic incised in wood, and was executed by Helen Broton.

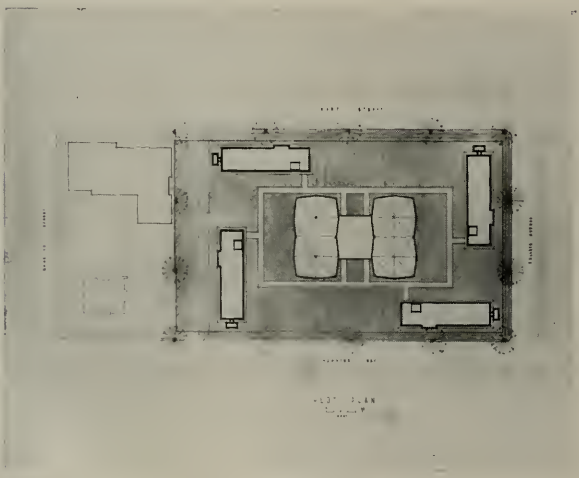
TYPICAL DORMITORY ROOM for student use in the new wing.

PERSPECTIVE of winning design

COMPETITION AWARD FOR DESIGN OF

STUDENT RESIDENCE HALL GROUP

UNIVERSITY OF CALIFORNIA, BERKELEY



WINNING DESIGN
SUBMITTED BY

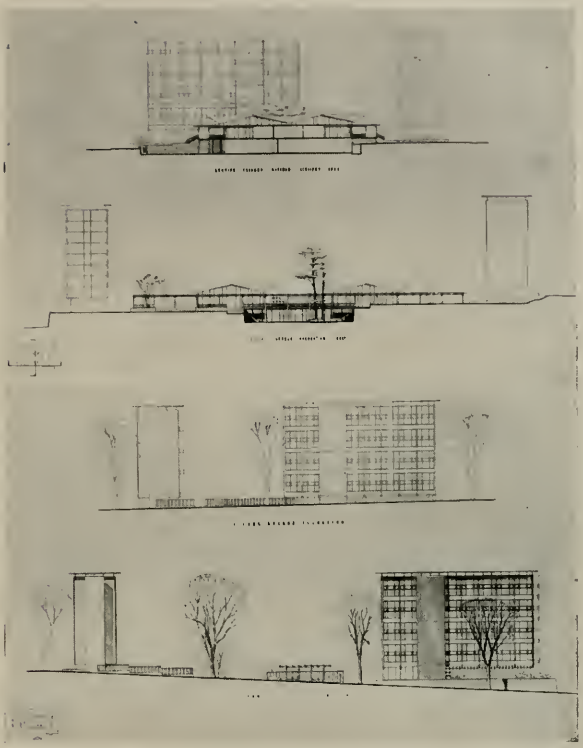
ARCHITECTS

JOHN CARL WARNECKE
CARL I. WARNECKE

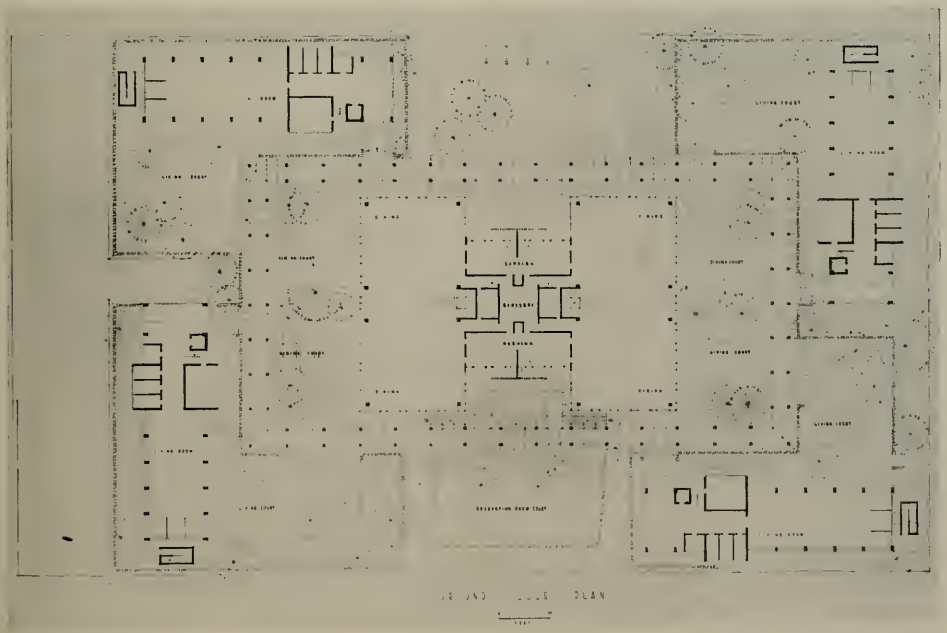
PLOT PLAN

An intensive competition between seven top architectural firms for the design of a new $5,000,000 residence hall at the University of California in Berkeley was won by the architectural firm of Carl I. Warnecke and John C. Warnecke, San Francisco and Oakland.

The Warnecke firm's design, submitted in complete anonymity with all other contestants, was the unanimous choice of the Jury on the first ballot. The announced decision of the jury was aided by John Lyon Reid, Architect, who acted as a professional advisor.



SECTION through Kitchen-Scullery area (upper right); a Section through the Recreation Court; College Avenue elevation, and Durant Street elevation. BELOW is Ground Floor Plan.



STUDENT RESIDENT HALL . . .

HONORABLE MENTION:

Design submitted by Architect John Funk, Kitchen and Hunt, was awarded significant recognition by the Award Jury.

MAIN FLOOR PLAN

HONORABLE MENTION AWARD

In commenting on his design Warnecke explained that it "consists of four seven-story buildings, placed on the perimeter of the site. The central area consists of four one-story dining dooms, adjacent to outdoor living and dining courts, providing an optimum of indoor-outdoor living. In designing the buildings the intent was to retain the character of the Bay Area tradition of architecture, which had its origin in the City of Berkeley, and of which there are still outstanding examples, in the work of Bernard Maybeck."

The jury in announcing the award declared:

"An excellent solution of brilliant simplicity has been achieved, and one which is in complete harmony of the objectives and character of the University as a whole."

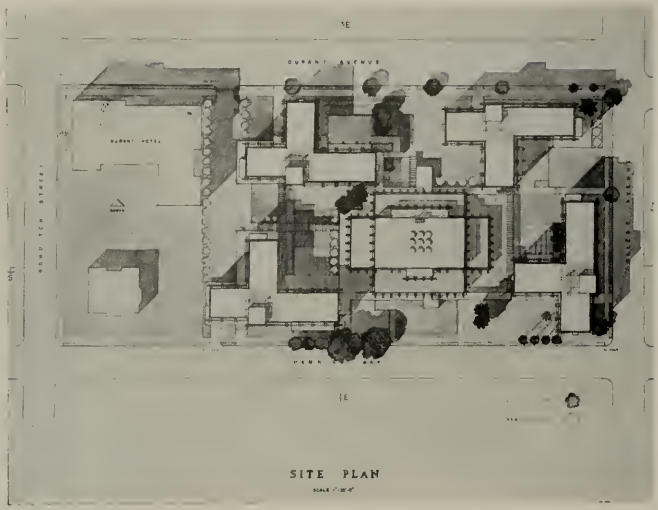
"Award was granted on the basis of utilization of the site, orientation, and the relation of the whole to the neighborhood and the university; on organization of the separate units and their inter-relation, and the organization and plan of the common facilities and service areas."

"The winning design managed to create a feeling of enclosed and comfortable space for the whole, and also intimate and friendly courts and gardens which

Architectural firm of PEREIRA and LUCKMAN was given an Honorable Mention Award for this design of the proposed Residence Hall project.

(See plan . . . above)

STUDENT RESIDENT HALL . . .



DETAIL

OF

DESIGN

Submitted by
Architect Vernon DeMars,
Architect Joseph Esherick,
and Architect Ernest Kump,
In Association

were considered appropriate to the University."

" . . . the fine integrated relation of outside and inside spaces so apparent in the winning design."

"Points of superiority in this design included a better relation to traffic to and from the campus both as to autos and pedestrians; a more natural and inviting entrance to the whole and integration with interior rather than exterior circulation to the various elements; a more attractive, informal and residential character for the central units; a better disposal of small courts off living and dining areas; a more convenient location of the recreation room to the residential quarters; a better plan for the residential units, particularly in regard to placing of the service elements, stairs and elevators."

"In conclusion, the Jury feels that the competition was conducted in an admirable manner, and to the benefit of the University."

Jury

Pietro Belluschi, FAIA, dean of School of Architecture, M.I.T.

John Ekin Dinwiddie, AIA, dean of School of Architecture, Tulane University.

Paul Thiry, F.A.I.A.

Mrs. Dorothy B. Chandler, regent.

Farnham P. Griffiths, regent emeritus.

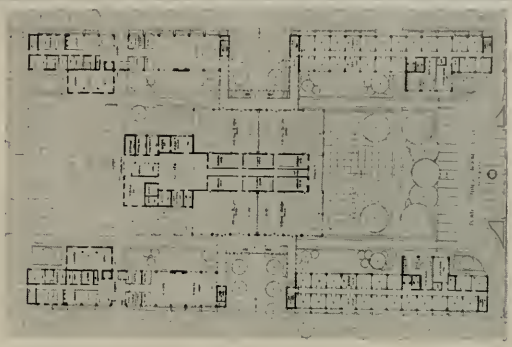
Professional Advisor: John Lyon Reid, F.A.I.A.

Architects Competing

John Funk, Kitchen and Hunt, Honorable Mention.

Pereira and Luckman, Honorable Mention.

DESIGN FOR 800-STUDENT RESIDENT HALL

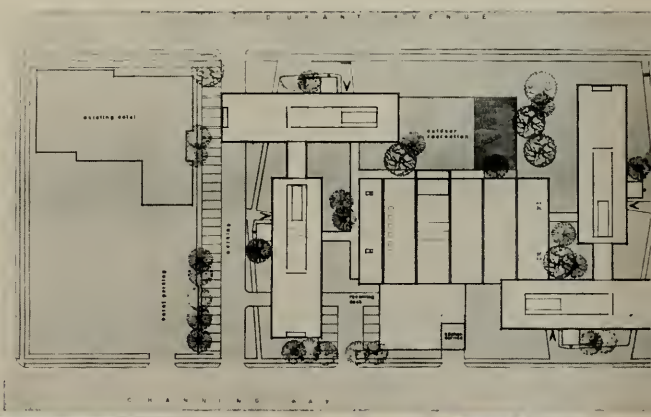


Submitted for Jury consideration by the Architectural firm of WEIHE, FRICK and KRUSE

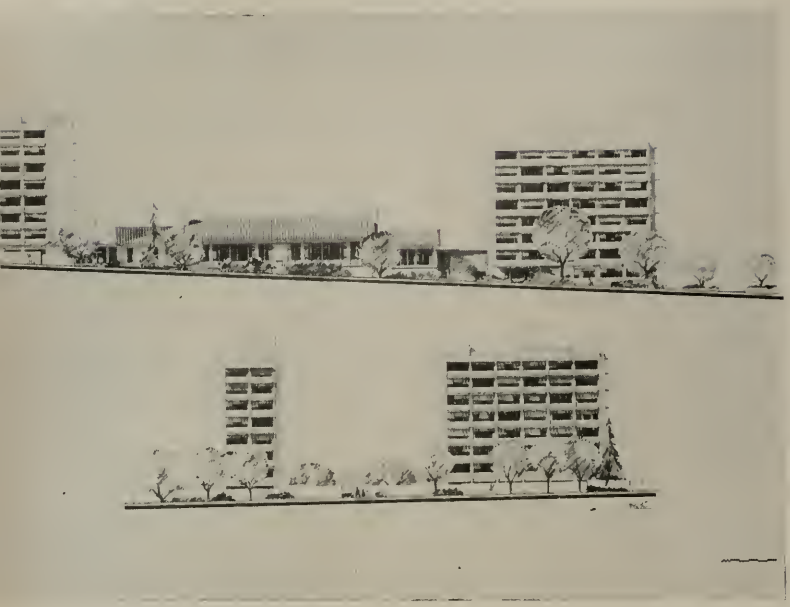
STUDENT RESIDENT HALL—Group

University of California, Berkeley

Submitted by Welton Becket and Associates, Architects and Engineers



STUDENT RESIDENT HALL . . .



DESIGN

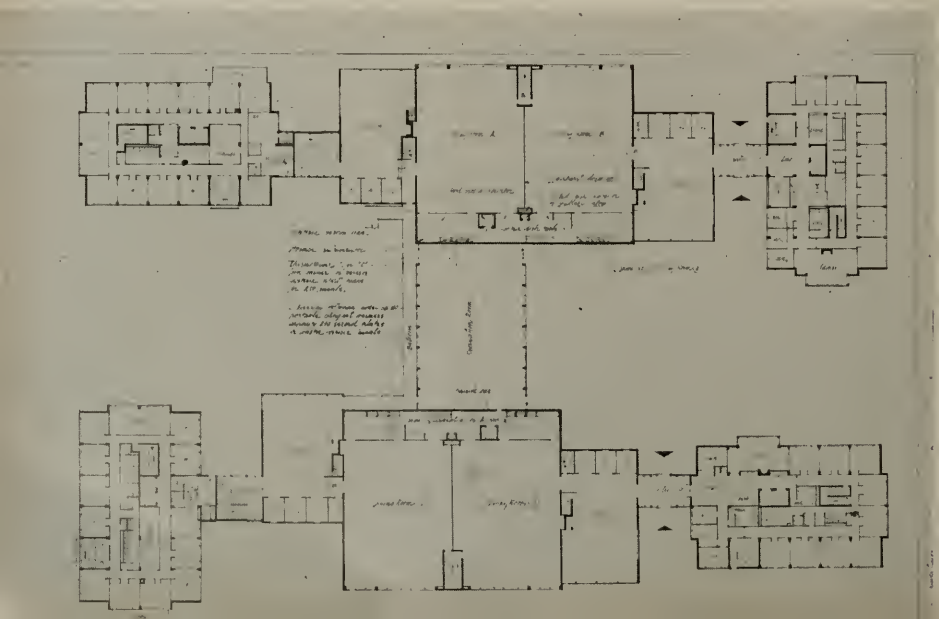
Submitted by Architect Gardner Dailey

(See plan below)

Welton Becket and Associates.
Gardner Dailey.
Vernon DeMars, Joseph Esherick and Ernest Kump.
Weihe, Frick and Kruse.
Warnecke and Warnecke.

The buildings, to be located west of College Avenue, between Channing and Durant Avenue adjacent to the campus, will include 200,000 square feet of building. Features to be incorporated beside the dormitory accomodations for 800 students, include recreation rooms, general administrative offices, dining and kitchen space.

The designing team, composed of John Warnecke and staff members Jim Chan, Neil Smith, Walter Popenuk, and Stanley Fishman, with landscape architect Lawrence Halprin.



HAWAIIAN RESIDENCE

MRS. MARIEL KING

HONOLULU, T. H.

Architects

LEMMON, FREETH

and HAINES

Oriental influences are prominent in the architectural design of the beautiful residence of Mrs. Mariel Kings, Honolulu, T.H., designed by the architectural firm of Lemmon, Freeth & Haines.

Surrounded by typical "island" landscaping, including a swimming pool, lanai, and large grass area, the home has been designed to utilize all of the site, and thick hand-split cedar shakes on a roof that tends to turn up at the eaves plus large floor-to-ceiling windows and a spaciousness of outdoor living area creates the impression of warmth and home comforts.

HAWAIIAN RESIDENCE . . .

WINDOW DESIGN

Is in keeping with architecture of entire home.

DISTINCTIVE LIVING ROOM . . . End wall, ceiling and floor design is unique. Curtain at right covers floor to ceiling window that overlooks swimming pool and outdoor area.

The interior carries out the motif of the exterior appearance:

Floors:
Lanai—Marble terrazzo
Living Room—Japanese tatami on concrete slab
Kitchen—Greaseproof asphalt tile on concrete
Other rooms—Fitted carpets on concrete

Exterior Walls:
8" thick hollow block, 4" high.

Wall Linings:
Grass cloth on plasterboard

Ceilings:
Grass cloth on plasterboard

Roof:
Thick hand-split cedar shakes

Door Frames and Doors:
Philippine Mahogany.

INTERIOR DESIGN . . . shows detail of ceiling, planting box.

CALIFORNIA'S HIGHWAY PROGRAM

(From page 7)

it costs five cents per course by machine, against 13 cents per course by conventional methods, not including checking.

Another and newer machine process computes the cubic yardage of earth to be moved for highway cuts and fills. Using field notes, the terrain data are punched onto cards, fed into the machine and the geometric solutions come out. A number of steps in the conventional design process, such as plotting of roadway cross sections, are eliminated by this method. Various alternate locations for the highway can be quickly compared as to size and cost of earthwork involved, and the cheapest practical location readily selected. On one ten-mile divided highway project through rolling terrain, machine computation of earthwork quantities saved the time of four engineers for one month.

Management-Organization

3. Management and Organization techniques are being used liberally to conserve engineering time and manpower. The statistician, the delineator (female as well as male), the research technician, the junior executive, the construction inspector—the abilities of these and other workers are being effectively utilized throughout the highway organization.

4. Efficiency is being further emphasized in routing procedure not yet adaptable to machine operation. Improved surveying instruments, calculators, and other equipment; simplified drafting and reproduction techniques; and shorter, more concise engineering reports are all saving engineering time and manpower.

5. Manuals governing and guiding the work of each department are in use throughout the Division. These manuals are recognized as being among the most complete and up to date in the nation. With these guides, less experienced engineers can perform more difficult types of work and newly recruited engineers can be rapidly trained.

6. Communications by two-way radio and teletype, for some time a valuable time-saving tool in highway administration and maintenance, is becoming an engineer-saving factor in the field. Radio has been used in establishing and checking triangulation for bridges across large bodies of water; members of survey parties relay positions and data by walkie-talkie; and the use of two-way radio in automobiles to conserve the time of resident engineers and assistants on large construction jobs is being explored.

Further Plans

These are some of the present ideas and devices to combat the engineer shortage. In the near future are, of course, further improved techniques: bigger and better electronic data processing machines; teletyping of figures and computations instead of mailing them; and expansion of photogrammetry into more and more detailed highway planning.

McCoy points to the fact that when the Legislature enacted the present level of highway user taxes in June, 1953, the Highway Commission and the Division of Highways translated more than $87,000,000 in added revenues into construction projects and right of way allocations without a moment's delay. This was because the plans were ready, or nearly ready, in advance. By using all modern methods available to combat the engineer shortage, and developing new ones, the Division of Highways is still able to keep its planning far enough ahead to handle additional construction if and when it is assigned.

LOS ANGELES HARBOR DEVELOPMENT

In keeping abreast of the surging industrial development of Southern California, the Board of Harbor Commissioners of the City of Los Angeles is completing a $35,000,000 building program, initiated shortly after the end of World War II, to create new facilities needed for the industrial expansion and bring up to date those improvements that had to be delayed during the war.

Two major postwar projects—a $10,000,000, 46-acre terminal at Berths 195-199 already preferentially assigned to Matson Navigation Company and the $6,000,000 8-acre combination passenger-cargo terminal completed for the American President Lines—are already occupied and have enjoyed a surge of cargo over their docks in the last year. Approximately $4,000,000 has been expended by the Harbor Commission to complete fish handling installations and about $7,000,000 has been spent in the last two years for land purchases, streets, dredgings, bulkheads and other improvements to existing property. These expenditures are in addition to a $1,000,000 a year spent for maintenance.

Harbor Engineers are in the process of completing four huge construction projects costing nearly $3,000,000. A 600-foot concrete and steel marginal wharf for the fishing industries is in use at Fisherman's Wharf, San Pedro District. In the last few months the Engineers have supervised the completion of a new 600-foot concrete and steel marginal wharf costing nearly $800,000 at Berth 199, Wilmington District for shipping. A $1,000,000 new transit shed is now being built on the wharf which will be assigned to the Matson Navigation Co.

Just recently a $375,000 project was finished at Berths 228 D and E in Port of Los Angeles. This project added 40-feet in width to the 960-foot transit shed leased to the Luckenbach Steamship Company. The addition of the 38,400 square feet to the shed

area makes its overall width 160 feet.

The additional 12,000 tons of cargo to be received there every month means $5 in wages for each ton received in the Los Angeles area, or a total of $60,000 a month.

Within the next 10 years $14,000,000 in new construction of transit shed improvements is on the Harbor Engineer's drawing board according to Bernard J. Caughlin, general manager of the Port of Los Angeles.

"We are in the midst of a separate $5,000,000 program, along with new construction, which calls for the widening of four shipping terminals in West Basin, Morman Island and Terminal Island," Caughlin said. "We also have plans to spend $6,000,000 for new cargo terminals in West Basin; $2,000,000 for the construction of roll-on roll-off facilities for new intercoastal and coastwise ships under construction; $1,000,000 for a bulk unloader and loader in West Basin; and $1,000,000 for a citrus pre-cooling plant."

A year ago, Rear-Admiral Edward V. Dockweiler was appointed Chief Engineer of the Los Angeles Harbor Department. The current construction program will be directed by him, as will the preparation of plans for operation of the Municipal cross-channel ferry; operation of the Badger Avenue drawbridge; Barracuda Street incinerator; regular engineering field surveys and inspection of construction work; inspection tests of engineering materials on purchases and construction work; research and marine borer investigations; and paint and soil foundation tests.

Only recently Admiral Lebbeus Curtis, USN, Ret., President of Pacific Trailorships, Inc., inspected three possible landing sites in Port of Los Angeles for the projected truck-trailer roll-on, roll-off type of vessels. The company proposed to operate the ships between Los Angeles and San Francisco within two years.

The usual ships will be stern loaded and have three truck parking cargo decks. Although no such ships actually exist today, one is under construction as a prototype by the U. S. Navy at a shipyard in Chester, Pennsylvania. Running time between the two West Coast ports is estimated at eighteen hours.

The trailorship idea is suggested as a means of greatly reducing cargo handling costs and time. Truck-trailors are driven dockside and towed aboard the ship. At the terminal the trailors are towed to destination thereby eliminating unloading from a land carrier and reloading to a water carrier.

Last Month, Mr. Caughlin, in submitting a new budget to the Board of Harbor Commissioners, said he anticipates a record income of $7,527,200 which will aid in the much needed construction of new facilities. This budget was adopted by the Board of Harbor Commissioners June 27. The new budget represents an increase of about $3,500,000 over that of the fiscal year ending June 30, 1956.

Among the principal sources of the estimated total receipts are dockage, storage, wharfage, demurrage and pilotage amounting to $3,711,000. This sum of money that will be realized from shipping operations is largely a result of the farsightedness of the Commissioners and the management of the Harbor Department in preparing soon after the close of the war for a big increase in world shipping.

COLLEGE ENROLLMENTS SHOW LARGE INCREASE

School and college enrollments this fall will be up 10-million over 1950 and an increase of ten million more is predicted by 1965. The expansion of our economy and our national security require much manpower development and should demonstrate to every citizen the wisdom of needed school expansion.

How these investments are made will determine whether the nation's schools shall continue to be instruments of freedom, designed by and for the people. If our investments in education are to continue in the spirit of voluntarism, then individual states, communities, and private organizations must provide adequate and wise expansion of our schools and colleges. The complex problem can not be met by compulsion of federal taxation and direction.

NEWS & COMMENT ON ART

(From page 5)

102 paintings, watercolors and prints with sport as their theme; and a special group of Paintings by Maurice Lapp.

The Achenbach Foundation for Graphic Arts is featuring, at the Museum, Seriographs—An Expression of the 20th Century; and on loan at the San Francisco Public Library is showing Prints, Travel Posters, and other Contemporary Graphic Art items from Asia.

SPECIAL EVENTS: Include an Organ Program each Saturday and Sunday at 3:30 p.m. featuring Richard Purvis, and Ludwig Altman; Educational Activities feature reopening of the Fall Painting Classes for Children, held each Saturday morning at 10:00 o'clock, starting September 15th.

The Museum is open daily 10:00 a.m. to 5 p.m. Holidays, 1-5 p.m.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is opening the fall season of art exhibitions with a showing of Paintings by the well known artists—Ruth C. Elliott, Alexander Nepote, and Hamilton Wolf. Together with an exhibit of Sculpture by Harry Crotty.

The Rotunda Gallery is located on the fourth floor of the City of Paris.

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Leon Chatelain, Jr., President
John N. Richards, 1st Vice President — Edward L. Wilson, Secretary
Philip Will, Jr., 2nd Vice President — Raymond S. Kastendieck, Treasurer
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Jack T. Woodmansee, Boise, President; Anton E. Droppiog, Boise, Vice President; Charles W. Johnston, Payette, Secretary-Treasurer. Office of Secty. 13 N. Eighth St., Payette, Idaho.

Monterey Bay Chapter:

Wallace J. Holm, President; Thomas S. Elston, Jr., Vice-President; Frederick C. McNulty, Sec.; George F. Rhoda, Treas. Office of Secretary-Treasurer, 2281 Prescott Street, Monterey.

Montana Chapter:

William J. Hess, President (Great Falls); John E. Toohey, Vice-President (Billings); H. C. Cheever, Sec.-Treas. (Bozeman). Directors: Oscar J. Ballas, Wm. J. Hess, John E. Toohey. Office of Secy., Bozeman, Montana.

Nevada Chapters:

RENO: David Vhay, President; Edward S. Parsons, Vice-President; George L. F. O'Brien, Secretary; Ralph Casazza, Treasurer.

CALIFORNIA COUNCIL OF ARCHITECTS

Every indication points to a great Annual Convention, October 10-14, in Yosemite, as advance reservations exceed any previous year and the number of architects indicating their intention of attending the five day conference is considerably ahead of expectations.

The professional program is nearing final form, according to William Corlett, chairman of the CCA Convention Advisor Committee. "Planning for a Decade of Growth," has been chosen as the theme of this year's Seminars, and speakers and the major convention panel discussions will explore the challenge posed to the architectural profession by the expected increase in California's population to more than 18-million by 1966.

Corlett announced three more outstanding speakers: Gordon R. Cumming, chief of the California State Bureau of Hospitals; Archibald Shaw, Scarsdale, N. Y., Superintendent of Schools; and Dr. Dwight Bentel, dean of the school of journalism at San Jose State College.

Anyone intending to attend this convention should make reservations without delay.

PASADENA CHAPTER

Kenneth Gordon staged his annual barbecue for the Chapter during September, as a wind-up for the summer, and the start of a heavy schedule of fall activities. The program of the meeting was in charge of the Associate Members, and the meeting marked another milestone in the events of the Chapter.

New members include: Thornton Ladd, John E. Nyberg and Edward Sullam as Corporate Members; and William W. Gossy, John L. Joe, Charles E. McGuire and Joseph R. Swartz, Associates.

NORTHERN CALIFORNIA CHAPTER

The September meeting, held at Di Maggio's Restaurant on Fisherman's Wharf, San Francisco, was devoted to the Annual Meeting of the Chapter with the Administrative Committee of the California Council Of Architects.

CCA officers attending the meeting included: John Lyon Reid, President; Glenn Balch, Vice-president; Lee Kline, Secretary; Albert Thomas, Treasurer. Discussed were proposed amendments to the Architects Practice Act; passage of Proposition No. 10, revision of the Fee Schedule, and the brochure "How To Select An Architect."

Recent new members to the Chapter include: George V. Banning, John M. Hogg, George C. Quesada, Jr., and Frank M. Studer.

SAN DIEGO CHAPTER

The September meeting, Madeline's Restaurant, Marlin Inn, was devoted to consideration of numerous Chapter matters, particularly the proposed amendments to By-Laws, attendance at meetings, and legislative activities.

Directors: David Vhay, Edward S. Parsons, M. DeWitt Grow, John Crider, Lawrence Gulling. Office of President, 131 W. 2nd St., Reno.

LAS VEGAS: Walter P. Zick, President; Aloysius McDonald, Vice-President; Edward B. Hendricks, Sec.-Treas.; Directors: Walter F. Zick, Edward Hendricks, Charles E. Cox. Office of Secy., 106 S. Main St., Las Vegas.

Nevada State Board of Architects:
L. A. Ferris, Chairman; Aloysius McDonald, Sec.-Treas. Members: Russell Mills (Reno), Edward S. Parsons (Reno), Richard R. Stadelman (Las Vegas). Office 1420 S. 5th St., Las Vegas.

Northern California Chapter:
Wm. Stephen Allen, President; William Corlett, Vice-President; Worley K. Wong, Secretary; Donald Powers Smith, Treasurer; Robert S. Kitchen, Bernard Sabaroff, Corwin Booth and A. Appleton, Directors. Exec. Secty. May B. Hipshman. Chapter Office, 47 Kearny St., San Francisco.

Orange County Chapter:
George J. Lind, President; John A. Nordbak, Vice-President; William T. Jordan, Secretary; Marvin W. Renfro, Treasurer. Directors—Everett E. Parks, William E. Blurock, Raymond W. Johnson, Office of Sec., 1606 Bush, Santa Ana, California.

Oregon Chapter:
Donald W. Edmundson, President; Walter L. Gordon, Vice-President; Earl P. Newberry, Secretary; Charles Gilman Davis, Treasurer. Directors: Donald J. Stewart. Office of Secy., 619 Builders Exchange Bldg., Portland.

Pasadena Chapter:
William H. Taylor, President; Lee B. Kline, Vice-President; H. Douglas Bylea, Secretary; Lyman F. Ennis, Treasurer. Directors: Henry C. Burge, Keith P. Marston, Ernest C. Wilson and Harold B. Zook. Office of Secty., 622 S. Lake Ave., Pasadena.

San Diego Chapter:
George J. Lind, President; John A. Nordbak, Vice-President; Willard T. Jordan, Sec.; Marvin W. Renfro, Treas. Office of Secretary, 1293 Harbor Blvd., Costa Mesa.

San Joaquin Chapter:
Philip S. Buckingham (Fresno), President; Allen Y. Lew (Fresno), Vice-President; James J. Nargis (Fresno), Secretary); Paul C. Shattuck (Merced), Treasurer. Directors: William C. Hyberg, David H. Horn, Alastair Simpson. Office of Secty., 627 Rowell Bldg., Fresno 21.

Santa Barbara Chapter:
Glen G. Mosher, President; Lewis Storrs, Vice-President; Darwin Ed. Pisher, Secretary; Wallace W. Arendt, Treasurer. Directors: Robert I. Hoyt and Roy Wilson. Office of Secty., 20 S. Ash St., Ventura.

Southern California Chapter:
Paul Robinson Hunter, President; Stanley R. Gould, Vice-President; Aleck Murrey, Sec.; Graham Latta, Treas.; Directors, Stewart S. Granger, George Vernon Russell, Cornelius M. Deasy, William Glenn Balch. Exec.-Secy., Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter:
Gilbert M. Wojahn, President; Gordon N. Johnston, 1st Vice-President; Robert T. Olson, 2nd Vice-President; Henry Kruize, Jr., Secretary; L. Dana Anderson, Treasurer; Robert B. Price and Nelson J. Morrison, Trustees. Office of the Secy., 2907 A St., Tacoma 2, Washington.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Lloyd J. Lovegren, President; James J. Chiarelli, 1st Vice-President; Harold W. Hall, 2nd Vice-President; John L. Rogers, Secretary Albert Bumgardner, Treasurer. J. Emil Anderson, Robert H. Dietz, Robert L. Durham, and Carl F. Gould Directors. Miss Doris Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter:
Wm. C. James, President; Carl H. Johnson, Vice-President; Keith T. Boyington, Secretary; Ralph J. Bishop, Treasurer; Lawrence G. Evanoff, Carroll Martell, Kenneth W. Brooks, Directors. Office of the Secy., 615 Realty Bldg., Spokane, Washington.

Hawaii Chapter:
Robert M. Law, President; Harry W. Seckel, Vice-President; Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P.O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS:
John Lyon Reid, President (San Francisco); William G. Balch, Vice-President (Los Angeles); Lee B. Kline, Secretary (Pasadena); Albert B. Thomas, Treasurer (Sacramento); Miss Rhoda Monks, Office Secretary. Office of Secty., 76 O'Farrell St., San Francisco.

CALIFORNIA STATE BD. ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles), Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Angeles; San Francisco Office, Room 300, 507 Polk St.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Albert Beber-Vanzo, Secty; Stanley Howatt, Treasurer. Club offices 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
J. Morris Hales, Ceco Steel Products Corpn, President; H. C. Galitz, Westinghouse Electric Corpn, Elevator Division, Vice-President; Owen L. McComas, Arcadia Metal Products, Secretary; LeRoy Frandsen, Detroit Steel Products, Fenestra Building Panel Division, Treasurer.

Producers' Council — Northern California Chapter (See Special Page)

Coostruction Specifications Institttue—Los Angeles:
D. Stewart Kerr, AIA, President; R. R. Coghlan, Jr., Vice-President; W. F. Norton, Secretary; Malcolm Lowe, Treasurer. E. Phil Filsinger, Liaison Officer, Producers' Council, Gladding, McBean & Company.

It was announced that the Chapter would soon publish a monthly bulletin in charge of John Deardorf.

New Member William F. Rosser has been elected to Corporate Membership.

SOUTHERN CALIFORNIA CHAPTER

The September meeting was the Annual Joint Meeting with the Producers Council and held this year at the Riviera Country Club in Pacific Palisades.

Included in the program were: Golfing, softball, refreshments, and other events, with prizes awarded to winners in all classifications of events.

CENTRAL ARIZONA CHAPTER

The September meeting was a steak dinner and dancing event at South Mountain Park—a final wind-up of summer activities.

Murray Harris has been appointed Chairman of the Exhibit Committee and will produce exhibit material for showing "Architecture" at various events scheduled during the balance of the year, including the Regional Convention Exhibit in Salt Lake City in October.

Chapter members will participate in a course at the level of the third year architectural design to be presented at Arizona State College this fall. Critics for the three six-week periods will be Dick Drover, Ralph Haver and Bob Cox. The study is intended for ASC students preparing for the Arizona State Architectural Board examination, and any other architect interested in a "refresher" course.

SAN DIEGO WAL

The first fall luncheon meeting was held this month in the University Club, with Norman Tolle discussing Proposition No. 10, which will be voted on at the November general election.

Reservations for the meeting were in charge of Mrs. Margaret Mitchell.

(See page 32)

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Structural Engineers Association of Northern California

Walter L. Dickey, President; Henry J. Degenkolb, Vice-President; Samuel H. Clark, Secretary; William K. Cloud, Treasurer; and Cecil H. Wells, Jr., Asst. Secy. DIRECTORS, William W. Brewer, Chas. D. De Maria, Clarence E. Rinne, Howard A. Schirmer, and James L. Stratta. Office of Secy., 411 Market St., San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers
Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Sec.y-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS ASSOCIATION OF CALIFORNIA

The 25th Annual Convention will be held October 11-13 in Reno, Nevada, with headquarters at the Mapes Hotel, and according to C. H. Herd of Sacramento, Association president, the meeting will be outstanding from a standpoint of attendance and technical discussions.

During the three-day sessions engineers of California, Nevada, Washington, and Oregon, will hear talks on such subects as "Future Engineering Manpower" with emphasis on Structural Engineering; the "Future Use of Computing Machines," and the "Future of Prestressed Concrete."

Other technical subects will include Hyperbolic-Paraboloid Roof Surfaces and Space Frame Construction Material; the use of High Strength Steels with Welded Fastenings and the Use of Metal Panel Walls. The technical program arrangements are under the Chairmanship of Len Hollister of Sacramento.

Social activities for the ladies, under the direction of Dorothy Ewing, include a Tea, Fashion Show, Golf Tournament and a Conducted Tour of Virginia City.

AMERICAN SOCIETY CIVIL ENGINEERS
San Francisco Section

Members of the Society have been invited to view the San Francisco Bay Model being constructed by the Corps of Engineers, U. S. Army, near Sausalito on October 13th.

This $600,000 model is being built as a part of a $2½-million study of the Bay Area, being conducted in the interests of navigation, flood control, water conservation, and reduction of dredging costs, and to test various plans that are being advocated for development of the Bay Area. The studies will take from 5 to 6 years to complete.

The model will be completed by the end of 1956, and since it is now under construction, excursionists will be able to observe the techniques used and in addition a motion picture will be shown providing additional background for this project.

STRUCTURAL ENGINEERS ASSOCIATION SOUTHERN CALIFORNIA

"Prestressed Concrete—Tanks, Domes, and Long Span Bridges," was the subject for discussion at the September meeting in the Roger Young Auditorium, Los Angeles.

John J. Closner, vice-president of the Preload Company, Inc., and in charge of construction and sales, was the principal speaker. He reviewed briefly the current practice in design and construction of pre-

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

Col. Wm. F. Cassidy, President; Cmdr. W. J. Valentine, 1st Vice-President; Col. Edwin M. Eads, 2nd Vice-President; Bob Cook, Secretary; C. D. Koerner, Treasurer. Directors Col. J. A. Graf, Capt. A. P. Gardiner, P. W. Kohlhaas, C. G. Austin and C. R. Graff.

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stressed tanks, and followed his remarks with a film showing construction of two 5-million gallon tanks. Selected slides were used to describe the 294 foot diameter dome over the new Sports Stadium at Havana, Cuba, and the 308 foot diameter suspended roof over the Industrial Exposition Building in Montevideo.

New members include: William F. Burkart, Robin A. Graves, Rudolph E. Leemhuis, Joseph L. Randall, Hans G. Steinmann and Robert E. Tebault, ASSOCIATE MEMBERS; Irwin Salin, William J. Lowe and John R. DeClure, Jr., MEMBERS; Algerd W. Dambros and William J. Hess, AFFILIATE MEMBERS; and Jack A. King, JUNIOR MEMBER.

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

"East Bay Rapid Transit" was the subject of the September meeting held in the Athens Club, Oakland.

Speakers included Donald Doyle, Assemblyman of the 10th District and active in transportation activities under consideration by the California State Legislature. His subject was "A Legislator Looks at Rapid Transit."

New Members: Charles L. McGovern, Egor P. Popov, and Andrew P. Stevens, MEMBERS; Kenneth H. Best, and Thomas H. Gentry, AFFILIATE MEMBERS; and Allan Conrad, Raj T. Desai, Robert L. McNeill, and Daniel K. Wong, JUNIOR MEMBERS.

ENGINEERS EXHIBIT AT LOS ANGELES COUNTY FAIR

The Structural Engineers Association of Southern California, installed and maintained an exhibit in the Commercial Arts Building at the Los Angeles County Fair in Pomona this month.

Arrangements for the event were in charge of George Youngclaus and Felix Kulka.

FEMINEERS SAN FRANCISCO

The Femineers were a busy group this Month. The 8th-Annual Dinner Dance for members and their husbands was held on the 8th in the Atlantic Room of Spenger's Fish Groto in Berkeley. Mrs. Victor Sandner, Berkeley, and Mrs. George Maurer, Alameda, were in charge of the event, with Mrs. Thomas Power, Oakland, in charge of decorations, and Mrs.

(See page 28)

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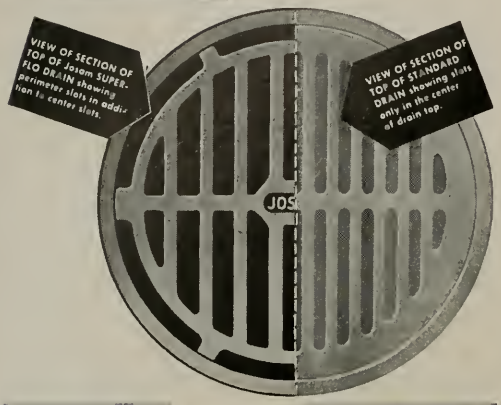
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ENGINEERS . . .

(From page 27)

Theodore Newman, Lafayette, handling reservations.

On September 19th in the Elks Club, San Francisco, the Annual Scholarship Bazaar and Country Fair was held. Different booths displayed homemade foods, holiday aprons, surprise gifts, and jewelry, plus door prizes. Mrs. Victor Sandner and Mrs. Arnold Olitt, Berkeley, were in charge of the event this year, and among those assisting in the booths were: Mrs. Theodore Newman, Lafayette; Mrs. Charles J. Lindgren, Sonoma, Mrs. Mark Falk, San Mateo; Mrs. George Maurer, Alameda; Mrs. C. Russ Graff, Danville; Mrs. Herman Yank, San Francisco; Mrs. Kenney McKesson, and Mrs. Thomas Power, Oakland; Mrs. MacGregor Graham, Mrs. Richard Woodlard and Mrs. Cedric H. Anderson of Berkeley.

Funds derived from the event are used to assist deserving students in obtaining college education in the field of engineering.

ENGINEERING PARTNERSHIP

Carl B. Johnson and Svend H. Nielsen have formed a partnership known as Johnson & Nielsen, Structural Engineers, and have opened offices at 2495 Huntington Drive, San Marino, California.

Offices have also been opened at 2391 Main Street in Riverside.

ST. JOSEPH'S COLLEGE

(From page 11)

of floor under pews are Tennessee pink, aisles and sanctuary floors are of Roman and Imperial travertine, bordered with red levanto. Marble mosaic symbols accent the entrance and sanctuary floors. The walls are paneled in oak and contained within the paneling are the stations of the cross also executed by Malmquist.

The altar, also of red and green levanto marble, reredos, and other sanctuary furnishings were designed by the architects with the assistance of Fr. Raymond J. Maher, treasurer of the college. The ceil-

(See page 33)

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MILITARY ENGINEERS HONOR ARCHITECT

The international architect-engineer firm of Skidmore, Owings & Merrill was recently awarded an honorary Sustaining Membership in the Society of American Military Engineers by the San Francisco Society, one of the largest Posts in the United States.

The award, received by William J. Watson of the firm's San Francisco office, was presented by Brigadier General Dwight F. Johns (USAR) at a recent dinner meeting. General Johns, Regional Vice President and past national president of the Society, was introduced by Brigadier General William F. Cassidy, South Pacific Division Engineers, Corps of Engineers, and president of the San Francisco Post.

General Johns, in making the presentation, said it was "in view of the interest shared by the firm in advancing the knowledge of the science of military engineering and the many contributions the firm had made to this field."

WOMEN'S APPAREL STORE FOR LAS VEGAS, NEVADA

The Joseph Magnin Women's Apparel Stores will open a new store in Las Vegas, Nevada, prior to the Easter season, according to an announcement by Colonial House Properties, Inc., developers of property along the "strip."

Victor Gruen & Associates of Los Angeles, is designing the new building as well as the master plan of the project, which will provide that a number of small, exclusive apparel and related shops might be added at a later date.

ARCHITECT SELECTED

The architectural firm of Warnecke & Warnecke, 111 New Montgomery Street, San Francisco, has been awarded a commission by the University of California, Board of Regents, to design a new Residence Hall to be built on the Berkeley campus of the University of California.

The new facilities will provide accommodations for 800 students, and will cost an estimated $3,000,000.

BOWLING ALLEY

Architects Powers, Daly & DeRosa, Gordon F. Powers, Architect, 3667 Atlantic Avenue, Long Beach, have completed drawings for construction of a 24-alley bowling center in the Ballard District of Seattle, Washington.

The center is owned by Seaview Lanes, Inc.

WOODWORK INSTITUTE OF CALIFORNIA MEET

A general membership meeting of the Woodwork Institute of California was recently held in San Francisco, following a Director's meeting at the Sheraton-Palace Hotel.

James Pierce of the Pacific Manufacturing Company, Santa Clara, was appointed to complete the term of his late father as Vice-President and Director.

Plans were announced for a greatly expanded and accelerated program which will include compilation and publication of a Manual for Millwork Inspection.

Among the speakers at the meeting were: Lester Barton, "How To Borrow Money"; James Dean, General Manager of the Building Material Dealers Credit Association of Los Angeles, spoke on "Lien Laws"; and Les Carr of the L. J. Carr & Co., Sacramento, discussed "Expanding and Contracting With the Market." Lawrence A. Smith, Jr., associate of Booz, Allen and Hamilton, San Francisco, spoke on "Margin, Volume and Profits."

U. S. BORAX BUILDS ANAHEIM PLANT

An orange grove in Anaheim, California, has been selected as the site for a completely modern research laboratory for United States Borax & Chemical Corpn.

Designed by Albert C. Martin and Associates, Architects and Engineers, the facility will provide ideal working conditions conveniently near a variety of desirable residential areas. Selection of the site away from the city, integration of existing landscaping with the physical structure of the building, and inclusion of interior courts and planting areas are all part of the basic plan to produce the best possible "climate" for scientific research.

Occupying an area of 30,000 sq. ft., the building will be of reinforced concrete construction. Auto parking will be provided. Estimated cost of the project is $850,000. Haas and Haynie-Frandsen are the general contractors.

DOUGLAS W. BELL NAMED TO PROMOTION GROUP

Douglas W. Bell, Plumbing and Heating Company, Denver, has been appointed to the Better Heating-Cooling Council,

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CONVALESCENT HOSPITAL

Architect Jensen & Miller, 308 South Tacoma Avenue, Tacoma, Washington, is completing drawings for construction of a 100-bed Convalescent Hospital Building to be built at 30th and Webster Street, Oakland, California, for the Bay Counties Properties Company, Inc., Charles Arolla, manager.

The new building will be 1-story, reinforced concrete construction.

RESIDENTIAL CONSTRUCTION COSTS EXPECTED TO RISE

John M. Dickerman, executive director of the National Association of Home Builders, Washington, D. C., said there is "every indication" that the cost of new homes will continue to rise in the months ahead, and called the situation "highly regrettable."

The tremendously high level of overall construction, now at an estimated annual rate of $44.4 billion, is exerting strong upward pressures on prices, and these will be increased sharply when the new highway program, which will make heavy demands on cement and steel capacity, gets fully underway.

"According to the Boeckh index," Dickerman said, "home building costs set a new peak in June, the 16th month in a row to show a rise, and realities must be faced, there are no present signs that this upward spiral is going to be halted."

WILLIAM A. MOLSTER PROMOTED BY NAHB

William A. Molster, special assistant since 1953 to John M. Dickerman, executive director of the National Association of Home Builders, has been named Director of a newly created NAHB Merchandising Department.

Molster has been acting as staff advisor to the NAHB Merchandising Committee, and was instrumental in organizing and directing the popular series of merchandising short courses for builders conducted in the National Housing Center this year.

COLUMBIA-GENEVA STEEL PUBLISH AIA FILE SHEETS

The United States Steel Corporation, Columbia-Geneva Steel Division, are currently publishing a series of AIA File Sheets, printed on heavy card stock for convenient reference and filing.

Issued thus far are "Bearing Values of USS Steel H-Beam Bearing Piles, A.I.A. FILE No. 6-A"; "Engineering Data for USS Di-Lok 2" Square Equivalent Concrete Reinforcing Bars, for heavy duty concrete construction, A.I.A. FILE No. 4-E-2"; and Movable Steel Interiors & Partitions, A.I.A. FILE No. 35-H-6."

The material is of particular interest to engineers, architects, contractors and building inspectors throughout the eleven western states.

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WESTERN STRUCTURAL TILE INSTITUTE

CONSTRUCTION SPECIFICATIONS INSTITUTE MEETING SUCCESS

The San Francisco Chapter of the Construction Specifications Institute recently heard a discussion on the subject "Acoustical Materials," by a panel including: Glen E. Harrington, Johns-Manville Corp.; Harold Murphy, Owens-Corning Fiberglas Corp.; Ken Pinney of F. K. Pinney, Inc.; and Frank J. Taforo of the Western Asbestos Company.

A brief history of the development of acoustical materials was given and samples of many of the products now available were shown.

Architect Robert Williams, AIA, discussed four new building products. The next meeting was scheduled for July 25th when the subject for discussion will be "Built-up Roofing."

AUTO SERVICE BUILDING

Engineer Leo W. Ruth, Jr. of San Jose is preparing plans and specifications for construction of a 1-story, reinforced concrete, tilt-up Auto Service building in San Jose for the St. Claire Motors.

The building will be 100 x 87 ft. and will have wood roof trusses and wood roof.

TOD AGRELIUS MOVES EAST

Tod Agrelius, assistant Sales Manager of the Weber Wall Division of Weber Showcase & Fixture Co., Inc., Los Angeles, has been transferred to the firm's Grand Rapids, Michigan plant and will become Sales Manager in that area, according to a recent announcement by Karl F. Weber, Vice-President and General Manager of the Grand Rapids Division.

AMERICAN GAS ASSOCIATION

"Automation" has invaded the kitchen, according to a convenient reference chart, "Gas Range Feature Finder" recently published by the American Gas Association, New York.

Modern gas ranges are fully automatic in every sense of the word, and are replete with an array of special features which offer today's homemaker the widest selection in gas range history.

The Chart shows at a glance the availability of various features and the names of some thirty-six manufacturers offering them. Special features are limited to those which are in greatest demand.

NAMED TO NATIONAL CHAMBER OF COMMERCE COMMITTEE

Frank E. McCaslin, President of the Oregon Portland Cement Co., Portland, Oregon, and Calvin K. Snyder, Manager of the Denver (Colorado) Chamber of Commerce, have been appointed members of the Construction and Civic Development Department Committee of the National Chamber of Commerce for 1956-57, according to a recent announcement by John S. Coleman, Chamber President.

Fred I. Rowe of Columbus, Ohio, will serve as Chairman.

ARCHITECT WINKLER AND STAFF MEMBERS KILLED

Architect Ernest F. Winkler of the San Francisco firm of Ernest F. Winkler, Architects-Engineers; associate W. Harold Farquarer, Educational Consultant of the firm; and Clarence Fong, a member of the drafting department, are presumed to have lost their lives the latter part of August, when their private airplane failed to reach San Rafael after taking off from the Eureka (California) airfield.

The three had been on an inspection tour of work under construction in the Eureka area and upon completion of viewing the projects, left on what would be a normal two hour trip to the San Francisco bay area.

Nothing has been heard of the plane or passengers since, although Winkler's brief case and a bucket seat and headlamp similar to that installed in the Winkler plane, were found about a week later washed ashore on Humboldt Bay sands about fifteen miles south of Eureka.

HAROLD B. GOTAAS APPOINTED DEAN

Harold B. Gotaas, professor of sanitary engineering at the University of California at Berkeley, has been appointed dean of the Northwestern Technological Institute, Northwestern University, Evanston, Ill., according to a recent announcement by President J. Roscoe Miller.

Gotaas will remain at the UC until mid-winter to complete research he is conducting. He has been on the UC campus since 1946 and has served as chairman of the division of civil engineering and irrigation.

BUILDERS EXCHANGE

Architect Alfred W. Johnson, 165 Jessie Street, San Francisco, is completing drawings for construction of a 1-story, 8000 sq. ft. in area, frame and stucco Builders Exchange building in San Carlos for the Peninsula Builders Exchange.

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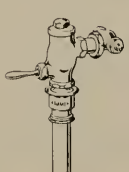

The new 72-page HAWS Catalog is out!

It describes Model 1505 and all of the latest designs in HAWS Drinking Fountains, Electric Water Coolers, Eye-Wash Fountains, and KRAMER Flush Valves.

If you haven't already received your copy, write today!

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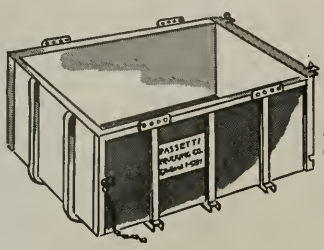
ENGINEERING PARTNERSHIP: Robert Marks and Joseph Porterfield have announced the formation of a partnership for the practice of Structural Engineering, to be known as Marks & Porterfield, Consulting Engineers. Offices will be maintained at 1109 N. Vermont Ave., Los Angeles.

PARTNERSHIP DISSOLVED: The partnership of Bowen, Rule & Bowen has been dissolved and Oliver Bowen and son Gerald have formed the firm of Bowen & Bowen, Inc., according to a recent announcement. Rhodes Rule has formed the firm of Rule, Dietz & Conkle.



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A.I.A. ACTIVITIES

(From page 25)

SOUTHWEST WASHINGTON CHAPTER

The Annual Regional Conference was held in Tacoma, September 6-9, with Gordon Johnston serving as general chairman of a very successful event, ably assisted by Jim Wilson, Earl Iverson, Al Liddle, Si Nelsen and Lyle Swedberg.

In addition to technical discussions of subjects related to the practice of architecture, special social events included a boat trip and fish-fry.

SANTA CLARA & SANTA CRUZ COUNTIES CHAPTER

A recent meeting was devoted to consideration of Proposition 10, and a tour of inspection of the Alto Alto Congregational Church under the direction of Bolton White who explained various features of the building.

REGIONAL AIA CONVENTION IS SCHEDULED FOR SALT LAKE CITY

The Utah Chapter of The American Institute of Architects, will host various AIA Chapters at the 5th

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PHOTO CREDITS: Morley Baer, Cover, Page 8, 9, 10, 11; Douglas Fir Plywood Association, Page 24; Blanchard & Maher, Architects, Cover, Page 8, 9, 10, 11; R. Wenkam, Page 21, 22, 23; Gabriel Moulin, Page 12, 13, 14, 15, 16, 17, 18; Warnecke & Warnecke, Architects, Page 12, 13.

ST. JOSEPH'S SEMINARY • MOUNTAIN VIEW, CALIF.

Architect: Blanchard & Maher

Contractor: Barrett Construction Co.

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Annual Regional Convention, scheduled for October 18-20 in Salt Lake City. Headquarters will be at the Hotel Utah.

Many interesting items have been arranged for the conference including a tour through the roof of the Mormon Tabernacle on Temple Square. Technical programs will include seminars on various architectural subects.

PADEREWSKI NAMED PRESIDENT STATE BOARD

Clarence J. Paderewski, AIA, San Diego, was recently elected president of the California State Board of Architectural Examiners for the ensuing year. Malcolm D. Reynolds, AIA, Oakland, was named Board secretary.

ST. JOSEPH'S COLLEGE

(From page 28)

ing is richly paneled in Port Orford cedar.

The baroque reredos is "open backed" in the form of a cross and five separate dossal hangings housed in pockets at the rear may be drawn across the openings to match the liturgical colors of the day, or they may be left completely open exposing the symbolic pattern of mosaic on the rear sanctuary wall. The massive candlesticks and cross were executed by San Francisco's famous silversmith, Dirk van Erp.

Intarsia panels (glass mosaic incised in wood) of rift oak and glass mosaic blend the sanctuary walls into the paneled walls of the chapel. The mosaic, executed by Helen and Marjorie Bruton, tells the story of the sacrifice of the Mass as forecast in the Old Testament and as a fullfilled in the New.

The subject matter was selected by Fr. Raymond Maher. The writer believes that these intarsia panels, used by the Byzantines in the 10th Century, are seen for the first time in this country. The work was executed by the Bruton sisters in their Monterey studios and assembled and installed at the job site.

This chapel is unusual in that the areas devoted to the sacristy are much amplified by the need of 14 additional sanctuary altars, forming an ambulatory at the rear of the sanctuary for the use of the many priests for the daily celebration of the Mass.

Landscape planner Prentice French is responsible for the development of the areas surrounding the seminary; the firm of Keller & Gannon were the mechanical and electrical engineers and Huber and Knapik were the structural engineers for the two million dollar addition.

MODULAR BUILDING COUNCIL ANNOUNCES NEW FORMATION

Previously announced plans for formation of a "Modular Building Council" with nation-wide membership were reinforced by recent action of the Board of Directors of The American Institute of Architects who took formal action in support of the new organization and authorized the Joint AIA-Producers' Council Committee to cooperate in the establishment of such a council.

Function of the Modular Building Council will be to bring together those people most interested in

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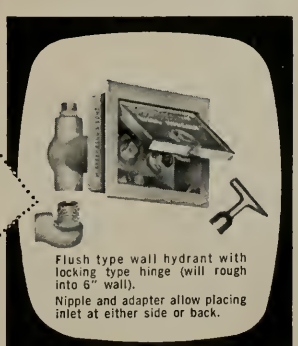

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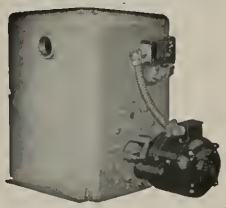

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improvement of dimensioning techniques in building. Its immediate goal will be to provide for development of a wider range of Modular-size building materials. It is expected the initial meeting of the Council will be held early this fall.

UNITED DESIGNERS ELECT OFFICERS

The United Designers' Association, in annual meeting in Santa Barbara recently, elected the following officers to serve during the ensuing year:

William Brock, President; Robert M. Sherman, Vice-President; La Verne Hadley, Secretary; Oscar Werner, Treasurer. Directors of the state-wide organization include, Edward Hageman, Robert Severen, Harry Bugenhagen, Leslie Van Dorn, Charles Taylor, Edward Cronin, Clare Earl, and Lewis Mussetti.

The pattern of the convention was centered around the application of new methods of applying new products, and new trends of thought within the profession. The trend of "Western Design" as applied to the profession, and its growing adaptation in Eastern areas of the nation was thoroughly discussed as were the possibilities of the refinement of this design.

ENGINEERING FIRM — Fred W. Kellberg has formed a new firm of Kellberg, Paquette and Maurer, Structural Engineers, with offices at 417 Market Street, San Francisco. Offices are also maintained at 1521 I Street, Sacramento, and 1044 Fulton Street, Fresno.

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Hollywood Jr. showing adjustable metal sash.

Hollywood Jr. showing removable sash unit.

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- The Hollywood Jr. Twins permit more light in kitchen and service porches.
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- No more detouring around a superfluous extra door with an armful of bundles.
- No more sagging, flimsy screen doors which invite intruders.
- Acts as an additional protection for housewife. She may converse with outsiders through sash opening without unlocking the door.
- Burglar-proof. A simple touch of fingers locks sash.

3 Economy
- Saves buying a Sash, Screen and Storm Door. Hollywood Jrs. are all 3 combined into 1 door.
- Saves on hardware, hanging and painting.
- Saves on expensive replacements.
- Saves space . . . The Hollywood Jr. Twins may be hung to swing in or out. Leaves available floor space which is usually lost in kitchen or entry way.

4 Panel or Flush
- Hollywood Jr. Twins give you your choice of a panel or flush door to harmonize with any style architecture or interior design.
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- Panel doors available in pine only.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

STREAMLINED SPECIFICATIONS STANDARDS, Vol. 2, Mechanical and Electrical. By John Small, AIA, and Louis Axelbank, M.E.P.E. Reinholt Publishing Corpn., 430 Park Avenue, New York 22, N. Y. Price $10.00.

The specifications writer will find the use of this book tantamount to having a consultant sitting at his elbow, giving him advice. Besides being a complete guide to orderly and intelligently organized specification writing, this second volume in the Streamlined Specifications Standards series is helpful because of the hundreds of parenthetical notes that call attention to pitfalls and the need for verification and coordination in specific instances and that refer to sources for additional information where needed.

The specifications themselves are designed to suit the mechanical and electrical needs of any size or type of building, except small homes.

Since the book is the first comprehensive guide to organized specification writing for mechanical and electrical services of buildings it should be a boon to architects, engineers, specification writers, draftsmen, and contractors.

SCHOOLS FOR THE NEW NEEDS, Educational, Social, Economic. F. W. Dodge Corpn., New York. Price $9.75.

Today's school buildings possess a "differentness" which is much more than a superficial attempt at novelty or newness. As school budgets have been shorn of nonessentials to provide for burgeoning school enrollments, so the school buildings themselves have been shorn of architectural whimsy, gingerbread and inefficient space.

In this new book, the editors of Architectural Record graphically present a stimulating cross-section of new school buildings which best demonstrate today's sweeping advances in concept and design. These schools, 66 in all, were selected from all parts of the country to present a wide geographic and climatic variety.

The reader of this book, whether architect, school administrator or layman, will be given a new insight into the problems and solutions of planning better schools at less cost.

EMPIRE IN WOOD. By Robert A. Christie. N. Y. State School of Industrial & Labor Relations, Ithaca, New York. Price $5.50.

Empire in Wood is a history of the Carpenter's Union and is one of the Cornell Studies in Industrial and Labor Relations; Volume VII. The book reveals the development of trade unions and their relationship to the development of modern economy and traces the Carpenter's Union from 1881 to 1950 thru the official files of the union; conventions and meetings.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

So You're Going Into Business. New booklet to help prospective business men; covers some of the more important points that need forethought before going into business, personal aptitudes and experience, selection of proper location, estimating costs and amount of capital needed, and whether to buy, rent or start from scratch; reference list of organizations and publications helpful. Free copy write DEPT-A&E, Chamber of Commerce of the U. S., Washington 6, D. C.

Metal lath attached directly to wood supports. Technical bulletin covers methods of attaching metal lath directly to horizontal wood supports; specifications section for recommended methods for nailing metal lath to wood studs and nailing or nailing-and-tying metal lath to wood joists; various tables and data on wood construction details. Write DEPT-A&E, Metal Lath Manufacturers Ass'n, Engineers Bldg, Cleveland 14, Ohio.

Concrete forming equipment. New 24-page catalog, in three colors, describes in detail concrete forming equipment, including all wood panel, steel ply, high strength panels with steel cross members, H-form, champ form, mag-ply panels, and

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Custom sound installations. 8-page brochure describes RCA sound, music and public address systems installed in auditoriums, outdoor theaters, stadiums, convention halls, and race tracks throughout the nation; non-technical, outlines 5-key requirements for a successful sound system. Free copy write DEPT-A&E, Radio Corporation of America, Sound Equipment, Camden, New Jersey.

Exceptional Plastic Waterstop on Market. New brochure gives complete data on "Durajoint", a new product and real answer to old problems that have faced the Design and Construction men for many years; designed with a hollow center bulb and with ribbed projections on either side, thus ensuring a complete seal; Polyvinylchloride fuses together with the addition of gentle heat, thus material can be spliced to any specified length; moving of forms can't damage "Durajoint" as it is tough, durable and resilient; installation uses illustrated. Free copy write DEPT.-A&E, Tecon Products, Inc., 304 S. Alaskan Way, Seattle 4, Wash.

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Loading Tests of Prestressed Basalite Lightweight Concrete Beams. Just published, the Report, prepared by Raymond E. Davis, Consulting Engineer of Berkeley, California, gives the results of short-time loading tests on six prestressed (pretensionized) Basalite lightweight concrete beams and girders which were tested at the Napa (California) Plant of the Structural Concrete Products Division of the Basalt Rock Company; these tests were part of a program covering short-time flexural and sheer tests of 19 beams and sustained-load tests on lightweight concrete, for which a comprehensive report will be published separately; descriptive material includes charts, drawings and photographs. Write DEPT.-A&E, Basalt Rock Company, Inc., Napa, California.

Touch control locks. New brochure describes the most revolutionary advance in lock sets in 150 years; finger tip control; modern design, beautiful finishes; installation data. Free copy write DEPT.-A&E, Screw Machine Products Co., 7737 N. E. Killingsworth Ave., Portland 20, Oregon.

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Common Brick—Per 1 M laid—$150.00 up (according to class of work).
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Common Brick—$36.00 per M truckload lots, delivered.
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2 x 6 x 12 Furring	$1.75 per sq. ft.
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For colored glaze add	.30 per sq. ft.

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4x5½x12-inches, per M	84.00

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12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
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2 ply per 1000 ft. roll	7.80
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Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb	5.05
Asphalt roofing, 15-lbs	2.70
Asphalt roofing, 30-lbs	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
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Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
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Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)—$1.25
Carload lots, in bulk, per bbl.—3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 per bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L.—2%
Trinity White, Medusa White, Calaveras White—1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk.—$13.15
Curing Compound, clear, drums, per gal.—1.03

CONCRETE BLOCKS—

	Haydite	Basalite
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd.—$7.75
⅜-inch to ¼-inch, per cu. yd.—7.75
No. 6 to 0-inch, per cu. yd.—7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $9.00 per square.
Membrane waterproofing—4 layers of saturated felt, $10.00 per square.
Hot coating work, $5.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$15 to $20 per outlet for conduit work (including switches).

Knob and tube average $6.00 per outlet.

ELEVATORS—

Prices very according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.00; clay or shale, $1.50 per yard. Trucks, $30 to $45 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $250 installed on new buildings; $300 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd.—$2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
Clear Qtd., White	$425	$405	$	$
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
33/32 x 2¼	390.00	381.00
33/32 x 2¾	375.00	355.00
33/32 x 3¼	395.00	375.00
33/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

33/32 x 2¼ First Grade	$390.00
33/32 x 2¼ 2nd Grade	365.00
33/32 x 2¼ 2nd & Btr. Grade	375.00
33/32 x 2¼ 3rd Grade	240.00
33/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
33/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
7/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
7/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
7/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
7/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$ 70.50
35,000 BTU	77.00
45,000 BTU	90.50
Automatic Control, Add	39.00
Dual Wall Furnaces, 25,000 BTU	91.50
35,000 BTU	99.00
45,000 BTU	117.00
With Automatic Control, Add	39.00
Unit Heaters, 50,000 BTU	202.00
Gravity Furnace, 65,000 BTU	198.00
Forced Air Furnace, 75,000 BTU	313.50
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	87.50
30 gal. capacity	103.95
40 gal. capacity	120.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(1") ..... $41.60 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides. ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $107.00
Rough, No. 2 common O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $135.00
½-inch, 4.0x8.0-SIS 200.00
¾-inch, per M sq. ft. 260.00
Plyscord ..... 11½c per ft.
Plyform ..... 19c per ft.

Shingles (Rwd. not available)—
Red Cedar No. I—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Double hung box window frames, average with trim, $12.50 and up, each.
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard $ .75
Three-coat work	per yard 1.00
Cold water painting	per yard 25c
Whiteweshing	per yard 15c

Linseed Oil, Strictly Pure (8asis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
½-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.00
Keene cement on metal lath	3.50
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	8.75
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $200.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50
Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F. L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M $240.00
Standard, 8-in. per M 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. .. 1.85

STEEL—STRUCTURAL—

$240 & up per ton erected, when out of mill.
$280 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

	F.O.B. 5. F.
Scored	
12 x 12, each	$ .17

Krattile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
4 x 4 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)

Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)

Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)

CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 380 S. 12th, Phoenix 4-5503
Tucson. Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)

Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)

CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)

Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)

GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)

Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4980

BRONZE PRODUCTS (8)

GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)

ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)

THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)

FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)

IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)

Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

CONSTRUCTION SERVICES (11a)

LE ROY CONSTRUCTION SERVICES
San Francisco, 143 Tird St., SU 1-8914

DECKS—ROOF (11b)

UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)

THE BILCO COMPANY
New Haven, Conn.

Electric Doors
ROLY-DOOR SALES CO.
San Francisco, 5976 Mission St., PL 5-5089

Folding Doors
WALTER D. BATES & ASSOCIATES
San Francisco, 693 Mission St., GA 1-6971

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)

MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)

Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)

Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)

W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Spokane: Realty Bldg., MAdison 6175
San Diego: 514 Spreckels Bldg., BEImont 4-6082
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

INTERCEPTING DEVICES (10a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3142

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)
KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., PArtsmouth 7-6760

METAL FRAMING (22b)
UNISTRUT SALES OF NORTHERN CALIFORNIA
Berkeley: 1000 Ashby Ave., TH 3-4964

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
W. P. FULLER COMPANY *(16)
Paint

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

ROOF TRUSSES (30a)
EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (31)
GLADDING, McBEAN & CO. *(3)

SHADES (31a)
SHADES, Inc.

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

SWIMMING POOL FITTINGS (34a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143

POOLS
SIERRA MFG. CO.
Walnut Creek, Calif.: 1719 Mt. Diablo Blvd.

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
I. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

TRUCKING (36a)
PASSETTI TRUCKING CO.
San Francisco 3: 264 Clementina St., GA 1-5297

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WEATHERSTOP
TECON PRODUCTS, LTD.
Vancouver, B.C. 681 E. Hastings St.
TECON PRODUCTS, INC.
Seattle 4, Washington 304 So. Alaskan Way

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Cracker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1 1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	e2.86	e2.86	c2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.765
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	N2.16	N2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
e $2.90 effective Sept. 15, 1955
c $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw IcADM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 10cP	12½cv	1½cA	10cP; IcA	12½cv	10cP; IcA		IcA					
ROOFER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	10cv		8½cw	7½cw
	7½cv	5cv	5cv	5cv	5cv		5cv					10cv	10cv
SHEET METAL WORKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	8½cw	8½cw	8½cw	8½cw	8½cw
		3¼cv	3¼cv	2%v			7½cv	4%v	6½cv	6½cv			9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP	10cw	10cw	10cw	10cw	10cw	10cw	10cw			10cw	10cw	10cw
	12½cv; 2½cJIB	IcA	IcA	10cP; IcA	12½cv	10cP; IcA		IcA					
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w 1¼%PROM				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

OFFICE & FACTORY, Palo Alto, Santa Clara county. George Wagner, 181 South Park, San Francisco, owner. 1-Story, reinforced concrete tilt-up construction; wood roof; 12,000 sq. ft. area. ENGINEER: J. J. Gould, 149 California St, San Francisco. GENERAL CONTRACTOR: Wagner & Martinez, 181 South Park, San Francisco.

FACTORY - OFFICE - WAREHOUSE, Porterville, Tulare county. Porterville Civic Development Foundation, Porterville, owner. 1-Story, structural steel frame, reinforced concrete tilt-up construction; steel roof decking, air conditioning — $932,386. ARCHITECT: Walter Wagner & Partners, 1830 Van Ness, Fresno. GENERAL CONTRACTOR: Harris Const Co, P. O. Box 108, Fresno.

ELEMENTARY SCHOOL ADD'N, Monte Vista, Monterey. Monterey Unified School District, Monterey, owner. Fourth unit comprising 4-classrooms, heater room, toilet rooms; frame and stucco construction — $92,222. ARCHITECT: Francis Palms, Mission & Ocean Sts, Carmel. GENERAL CONTRACTOR: Jake D. Huizenga, P. O. Box 243, Seaside.

OFFICE BLDG, Panorama City, Los Angeles county. Morris C. Schrager, Panorama City, owner. 2-Story brick, composition gravel roof, pipe columns, concrete slab, fireplace, interior plaster, asphalt tile and carpet, acoustical tile, ceramic tile wainscoting, aluminum and glass sliding doors, steel stairs, air conditioning, 25x170 ft. ARCHITECT: Rochlin & Baran, 14540 Gilmore St, Van Nuys. GENERAL CONTRACTOR: Gerber & Licha Const Co, 15495 Ventura Blvd, Van Nuys.

TELEPHONE DIAL BLDG, Cottonwood, Tehama county. Pacific Telephone & Telegraph Co, 177 Post St, San Francisco, owner. 1-Story frame and stucco construction; 19x22 ft. GENERAL CONTRACTOR: Truex Const Co, P. O. Box 825, Red Bluff.

WEST COVINA HIGH, Los Angeles county. Covina Union High School District, Covina, owner. Facilities include Administration bldg, library, business education, art and homemaking, science, shop, girls shower and locker bldg., academic classroom bldg, multi-purpose unit, music bldg, connecting covered passages; paving, grading, fencing — $2,073,000. ARCHITECT: Kistner, Wright & Wright, 1125 W. 6th St, Los Angeles. GENERAL CONTRACTOR: Morley Building Co; 7700 Sunset Blvd, Los Angeles.

MEDICAL BLDG, Van Nuys, Los Angeles county. Dr. Mekelburg, Van Nuys, owner. Frame, stucco and masonry veneer, composition roofing, concrete slab and asphalt tile floors, plate glass, acoustical tile ceilings, plumbing, electrical, air conditioning, aluminum store front, asphalt paving; 6000 sq. ft. area. ARCHITECTS: Spotts, Candreva & Jarrett, 1124 S. Beverly Dr., Los Angeles. GENERAL CONTRACTOR: Contracting Engineers Co, 2310½ W. Vernon Ave., Los Angeles.

SWIMMING POOL, Franklin High, remodel, Stockton, San Joaquin county. Stockton Unified School District, Stockton, owner. Remodel interior and exterior of present high school building and construct a new 42x75 foot, reinforced concrete swimming pool—$138,790. ARCHITECT: Ernest & Lloyd, John C. Lloyd, architect, 2132 N. El Dorado, Stockton. GENERAL CONTRACTOR: Nomellini Const. Co., P.O. Box 1528, Stockton.

AUTO SALES & SERVICE, Calistoga, Napa county. Birleffi Motors, Inc., Calistoga, owner. 1-Story concrete block and frame construction, tapered steel beams—$28,500. ARCHITECT: Beland & Gianelli, 1903-A Sonoma Ave, Vallejo. GENERAL CONTRACTOR: John Cavaglieri, 1834 Lake St, Calistoga.

NEW ELEMENTARY SCHOOL, La Habra, Orange county. La Habra Elementary School District, La Habra, owner. Included in project are 16-classrooms, administration facilities, and parking area—$233,933. ARCHITECT: Harold Gimeno, 1416½ N. Main St., Santa Ana. GENERAL CONTRACTOR: O'Dell Construction Co., San Gabriel.

NEWSPAPER PUBLISHING PLANT, West Covina, Los Angeles county. V-T Corpn, Covina, owner. 1-Story and mezzanine floor, frame and stucco newspaper publishing plant, West Covina; 6800 sq. ft. area, composition roofing, steel sash, concrete slab and wood floors, interior

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plaster, plumbing, light and power wiring. STRUCTURAL ENGINEER: Raymond H. Deddens, 4645 Van Nuys Blvd, Van Nuys. GENERAL CONTRACTOR: C. E. Scott, 20857 Mesa Rica Rd., Covina.

MARINE TERMINAL, Lake Maracaibo, Venezuela, Creole Petroleum Corpn, Caracas, Venezuela, owner. Tanker loading and marine terminal—$17,000,000. GENERAL CONTRACTOR. Pipe Line Engineering Company, P. O. Box 13,227, Dallas, Texas.

COURT HOUSE ADD'N, Ukiah, Mendocino county. County of Mendocino, Ukiah, owner. Third floor addition to West Annex, structural steel frame and light weight reinforced concrete walls and roof slab; facilities for 2-court rooms and judges chambers—$153,574. ARCHITECT Frank O. Merwin, 716 Montgomery St., San Francisco. GENERAL CONTRACTOR: Rothschild, Raffin & Weirick, 274 Brannan St., San Francisco.

BOWLING ALLEY, Phoenix, Arizona. Robert Ong, 2004 E. Madison St., Phoenix, owner. 1-Story masonry building, 150x107 ft; facilities for bowling, lockers, and bar—$160,000. ARCHITECT: John Sing Tang, Arizona Title Bldg, Phoenix, Arizona. GENERAL CONTRACTOR: E. L. Farmer Const'n Co., 2801 N. 32nd St., Phoenix.

OFFICE BLDG, Berkeley, Alameda county. California Trucking Corpn, Oakland, owner. 1 and part 2-story, frame and stucco, brick veneer, aluminum sash, acoustical ceiling, plasterboard walls, asphalt tile floors—$50,750. STRUCTURAL ENGINEER: Hugh M. O'Neil Co., 610 16th St., Oakland. GENERAL CONTRACTOR: Christensen & Lyons, 3454 Harlan St., Oakland.

NEWSPAPER PLANT, Santa Ana, Orange county. Santa Ana Register, Santa Ana, owner. 2-Story, completely air conditioned, steel and concrete—$463,942. GENERAL CONTRACTOR: William D. Greschner & Co., Santa Ana.

ELEMENTARY SCHOOL, Jamestown, Tuolumne county. Jamestown Elementary School District, Jamestown, owner. Frame and stucco construction; 4 classrooms, toilets—$44,574. ARCHITECT: Warren Wong, 2644 Pacific St., Stockton. GENERAL CONTRACTOR: Swendeman & Son, P. O. Box 334, Angels Camp.

FACTORY AND WAREHOUSE, Porterville, Tulare county. Porterville Civic Development Foundation, Porterville, owner. 1-Story reinforced concrete panel walls, demolition and clearing, earthwork, structural steel, masonry, plastering, sheet metal, plumbing, electrical, heating and ventilating, movable partitions, vault doors, metal acoustical panels, adjustable loading ramps, toilet partitions, floor scales, asphalt paving, railway spur, 362x241 ft. area—$932,386. ARCHITECT: Walter Wagner and Partners, 1830 Van Ness Ave., Fresno. GENERAL CONTRACTOR: Harris Construction Co., Box 109, Fresno.

SOILS SCIENCE GREENHOUSE, University of California Campus, Davis, Yolo county. Board of Regents, University of California, Davis, owner. Construction of a new greenhouse for soils science—$43,901. GENERAL CONTRACTOR: Griffin Const Co., 5356 Rosalind Ave., El Cerrito.

JAIL ADDITION: Las Vegas, Nevada. Las Vegas Board of City Commissioners, Las Vegas, owner. Construction of additions to the Las Vegas City Jail—$94,247. ARCHITECT: Harry Whiteley, 314 N. 5th St., Las Vegas. GENERAL CONTRACTOR: Ben O. Davey Construction Co., Box 2106, Las Vegas.

SWIMMING POOL, Glendora, Los Angeles county. Glendora Country Club, Glendora, owner. 35x75 ft. in area, 112,000 gallon capacity, sides constructed against compacted fill; 4-60" diameter rapid sand filter tanks, gas chlorinator, recirculating scum gutters, precast concrete and stone coping, 5000 sq. ft. monolithic buff colored concrete decking, 2-diving boards, four 500-watt wet niche lights, pool depth from 3 ft. to 10½ ft. ENGINEERS: Perry, Henderson, Powell & Minasian, Inc., Engineers and Architects, 110 E. Foothill Blvd, Arcadia. GENERAL CONTRACTOR: R. B. Perry & Associates, 110 E. Foothill Blvd., Arcadia.

LUXURY MOTEL, El Camino Real, Palo Alto, Santa Clara county. Dinah Hotel Corpn., Menlo Park, owner. 1-Story, post and beam construction, wood exterior, shake roof, metal, glass and sliding doors; administration offices, 48-units, swimming pool. ARCHITECT: Campbell & Wong, 737 Beach St., San Francisco. GENERAL CONTRACTOR: Roy Giorgi, 4186 El Camino Real, Palo Alto.

PRINT SHOP, Burbank, Los Angeles county. North Hollywood Printing Co., Burbank, owner. 6000 sq. ft. area in building, composition roofing, suspended fiber glass and acoustical ceiling, integral lighting fixtures, post and beam construction, air conditioning, concrete slab, vinyl tile flooring, multiple chamber incinerator, toilet rooms, office area. ENGINEER: C. F. Ewald and Robert O'Hanlon, 3607 W. Magnolia Blvd., Burbank. GENERAL CONTRACTOR: John Pagliuso, 1710 Ridgeway Drive, Glendale.

DENTAL & ATTORNEY'S OFFICES, San Rafael, Marin county. Two story frame and stucco construction; 3,500 sq. ft. of area; facilities for Dentists office and for attorney. ARCHITECT: Gromme, Mulvin & Priestly, 1539A-4th St., San Rafael. GENERAL CONTRACTOR: Don Presco, 55 Broadview Drive, San Rafael.

GOMPERS CLINIC ADD'N, Phoenix, Arizona. Samuel Gompers Clinic, Phoenix, owner. Addition of a 30-room wing, including administrative offices, gymnasium, equipment rooms, steel frame and cement block construction, built-up roofing, slab and asphalt tile floors, refrigerated cooling system, insulation, plastering, metal sash, ceramic tile work; 15,000 sq. ft. area. ARCHITECT: Fred Guirly, 566 E. Camelback Road, Phoenix. GENERAL CONTRACTOR: Mardian Construction Co., 1314 N. 21st Ave., Phoenix.

BANK, STORES, OFFICE, Reno, Nevada. Nevada Marts, Inc., Reno, owner. Two and 3-story, and basement, reinforced concrete construction, plate glass front, aluminum sash; 100x250 ft. GENERAL CONTRACTOR: Stolte, Inc. 8451 San Leandro St, Oakland.

INDUSTRIAL BLDG, El Segundo, Los Angeles county. Damien O'Brien, El Segundo, owner. Reinforced brick industrial building, tapered steel girders, structural steel, composition roofing, concrete slab, steel roll-up doors, steel sash, plumbing, electrical, spur track, fire sprinkler system, air conditioning, asphalt paving; 46,000 sq. ft. area. ARCHITECT: A. J. Arany, 14611 Ventura Blvd., Sherman Oaks. GENERAL CONTRACTOR: Carpenter & Smallwood, 3838 W. Santa Barbara Ave., Los Angeles.

INDUSTRIAL ARTS BLDG, ADD'N, College of Marin, College of Marin, Kentfield, owner. 2nd Story addition to present 1-story building to provide facilities for Industrial Arts—$45,469. ARCHITECT: Corlett & Spackman, 347 Clay St., San Francisco. GENERAL CONTRACTOR: Ray I. Johnson Co., P. O. Box 98, Kentfield.

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IN THE NEWS

JUNIOR COLLEGE SCIENCE BUILDING

Architect John W. Bomberger, 1505 10th Street, Modesto, has completed plans for construction of a new Science Building on the Junior College campus at Modesto for the Modesto Unified School District.

The new building will contain 40,000 sq. ft. of area; will be 2-stories high and of reinforced concrete construction.

Architect Harry J. Devine, 1012 J Street, Sacramento, will serve as supervising architect on the work.

CHURCH AND SUNDAY SCHOOL

Architect Floyd B. Comstock & Associates, 1620 Cypress Street, Walnut Creek, has completed drawings for construction of a new Church and Sunday School to be built in Stockton for the Trinity Presbyterian Church.

The new facilities will comprise 3,500 sq. ft. of area and will be of frame construction.

CALIFORNIA HIGHWAY PROGRAM EXPANDED

The California Highway Commission recently announced the addition of $47,245,000 to the State highway right-of-way acquisition program and $16,300,000 to the construction program for the 1956-57 fiscal year.

The budget revisions represent for the most part the initial effect on California of the Federal Aid Highway Act of 1956.

Director of Public Works Frank B. Durkee, Chairman of the Commission, said that the initial emphasis on rights-of-way was necessary in order to clear the way for construction in succeeding years, when larger Federal appropriations will be made.

BERKELEY OFFICE BUILDING PLANNED

Structural Engineer H. M. O'Neil Company of Oakland is preparing plans and specifications for construction of a 1-story, 4000 sq. ft. area office building to be built at the corner of Folger Avenue and 7th Street in Berkeley for the California Trucking Association, Inc.

OVER-THE-FLOOR EXTENSION DUCT

This new over-the-floor electrical extension duct for offices, homes and places where an electrical outlet is needed in the middle of the room is made of rubber.

It's stumble-proof and unobstructive: office equipment on casters rolls over it easily. One end is plugged into a wall outlet and the other end has a two-way receptacle. The duct is 2¾" wide at the base, which rises from a feather edge to an apex of 7/16". Ribs on the underneath side prevent slipping on the floor and the enclosed wiring is safe from moisture. The complete duct system ready to plug into a wall outlet is available in standard 4, 5, 6, and 10 foot lengths; special lengths for custom installation. Complete data from manufacturer— Ideas, Inc., 615 South 2nd, Laramie, Wyoming.

EASTMAN KODAK NEW OFFICE-WAREHOUSE

The architectural firm of Kitchen & Hunt, 525 Market Street, San Francisco, is preparing drawings for construction of a 2-story and part 3-story reinforced concrete, light steel frame office and warehouse building, Van Ness Avenue, Beach

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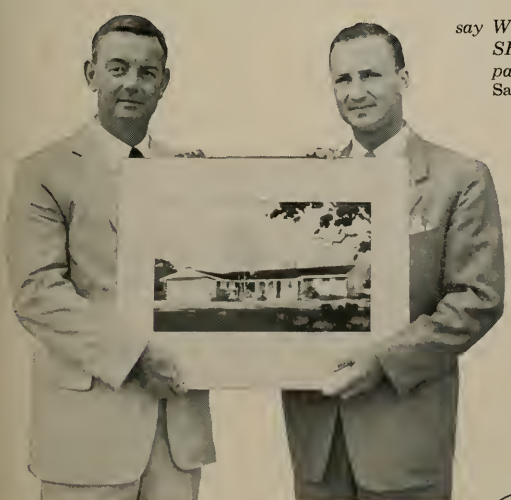
Buyers look for telephone planning in today's homes



say WELDON B. MANSFIELD *and* SHELDON W. PARKER, *partners*, Western Enterprises, Inc. Sacramento, California

Buyers of new homes "just naturally expect" built-in telephone outlets in convenient locations, report builders Mansfield and Parker. The same goes for concealed telephone wiring. Western Enterprises' newest development offers these features—plus two color telephones and six-months' service *free of charge* for each home.

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and Bay Streets in San Francisco for the Eastman Kodak Company.

The new structure will provide facilities for a distribution center and will contain 137 x 384 ft. of area. Estimated cost is $2,250,000.

ARCHITECT SELECTED

The architectural firm of Hertzka & Knowles, 85 Post Street, San Francisco, and Thomas Price of Galveston, Texas, have been selected to design and prepare drawings and specifications for construction of a 500-room Garden-type Hotel at Van Ness Avenue, Geary street, Post street and Franklin street, San Francisco, for Charles A. Sammon of Dallas, Texas, and Paul Robinson of Tucson, Arizona.

The project will include a swimming pool, office building, 1,000 car garage, and the estimated cost of construction is $5,000,000.

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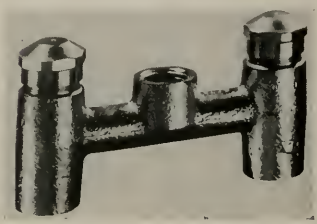
NEW VALVE CURES SWEATING PROBLEM

Development of a valve to cure sweating of toilet tanks has been announced by Milwaukee Faucets, Inc., 313 East Reservoir, Milwaukee, Wisconsin.



The valve stops toilet tank dripping before it can start by regulating water temperature in the toilet tank. It prevents toilet tank condensation and eliminates any need for drip trays, chenille covers, and a special complete installation kit affords quick, easy installation.

It is an all brass valve with bronze spring checks; adjustments are located under the hot and cold water valve caps. Only a screwdriver is needed to regulate temperature of mixed water to that of room. For details write the manufacturer.

CONSTRUCTION INDUSTRY SERVICE KEEPS GROWING

One of the unique special construction-building services that keeps advancing with West Coast development is the specialized services offered by the Passetti Trucking Company, Inc., 264 Clementina Street, San Francisco.

Pete Passetti, president, organized the firm 21-years ago, and has largely specialized in the demolition of concrete structures. His son, Pete Passetti, Jr., joined the company following active service in the US Navy, and also associated with the organization is Eddis Under, demolition department. and Harry Krier, III, office manager.

Currently the company is engaged in work on the Pacific Tel & Tel building addition in San Jose, a building being reconstructed by Louis C. Dunn, general contractor.

CHARLES M. SCHILLMOLLER JOINS WEST COAST STAFF

Charles M. Schillmoller of Los Angeles, has joined the staff of the West Coast Technical Field Section of the International Nickel Company's Development and Research Division, according to a recent announcement by Donald J. Reese, Assistant Manager of the Division.

He was formerly corrosion engineer with the Richfield Oil Corpn., Los Angeles.

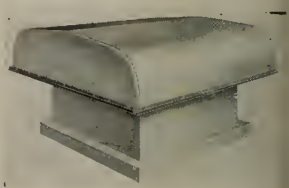
ARCHITECTURAL FIRM IN NEW LOCATION

The architectural firm of John Brenner and Associates, Architects, have moved into their new location, 97 West Lynwood Street, Phoenix, Arizona.

The firm, well known in the Pacific Southwest region, is composed of A. John Brenner and E. W. (Rex) McIntire, III., members of the AIA.

INDIVIDUAL ROOF VENTILATION

Where individual units of low contour roof ventilation are indicated, here is a rectangular shaped ventilator designed on the principle of deflecting expelled air downward to the roof.



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BEN H. SOUTHLAND BECOMES PARTNER

Ben H. Southland, graduate of the University of Southern California, Bachelor of Architecture degree, has been made a full partner in the firm of Victor Gruen & Associates, Los Angeles.

He joined the firm in 1948, following four years of service with the U. S. Navy, and serves as Director of Planning and Design.

SYLVANIA ELECTRIC BUILDS NEW PLANT

An impressive addition to the San Francisco Peninsula's industrial growth is the Sylvania Electric Products, Inc. plant in the Millsdale Industrial Tract in Burlingame.

The spacious 80,000 sq. ft. plant, designed by Architect John S. Bolles, AIA, San Francisco, will house the company's regional sales offices and handle the distribution for light tubes and electronic equipment.

COLORADO CONSULTING ENGINEERS AWARD

Tipton and Kalmbach, Inc., consulting engineers of Denver, have been awarded four contracts, three of which were made by the Board of Water Commissioners, City and County of Denver.

The first, valued at $40,000,000, is for the design of the 23-mile Harold D. Roberts water tunnel; the second at $2,900,000 for the Williams Fork concrete arch dam; the third at $6,000,000 for the extension of Jones Pass Transmountain Diversion. The City of Englewood, Colorado, has also retained the firm for $4,600,000 to design the Ranch Creek Transmountain Diversion.

ASTI IN PACIFIC AREA MEETING

The Second Pacific Area National Meeting of the American Society for Testing Materials, was held in Los Angeles, September 16-21, with the six days devoted to an outstanding technical program. Prominent leaders in the field of "materials for industry" presented many papers on research, the testing of metals, and related subjects.

A special feature of the conference was the holding of a number of luncheons and visits to laboratories and industrial plants in the Los Angeles area.

Principal speaker at the President's National Luncheon was Lt. Gen. Clarence S. Irving, Deputy Chief of Staff Air Force, who had just returned from a trip to Russia with General Twining.

LOW PRICED LIGHTING UNIT

A new, low-priced fluorescent lighting unit, just 3" high by 10" wide, and available in 48" and 96" lengths for individual or continuous line installation, has recently been announced.

Its extremely trim contour helps enhance the appearance of schoolroom lighting installations, while its highly diffused illumination also makes the unit well suited for stores, offices, and other commercial interiors. It is designed for two 40-w Rapid Start or 96" Slimline lamps. Special designed sliding hangars are available so that units may be mounted under pipes or duct work. Complete data from Benjamin Electric Mfg. Co., Des Plaines, Illinois.

COURT HOUSE ANNEX

The architectural firm of Schubert & Friedman, 230 California Street, San Francisco, is completing drawings for construction of a 3-story and basement addition to the Marin County Court House in San Rafael.

The building will be Type 1, reinforced concrete construction, will contain 24,000 sq. ft. of area, and will provide facilities for new court rooms, judges' chambers and jury rooms.

Estimated cost of the work is $400,000.

ARCHITECT SELECTED

The architectural firm of John Lyon Reid & Partners, 1069 Market street, San Francisco, has been commissioned by the Board of the Larkspur Elementary School District, Larkspur, Marin county, to draft

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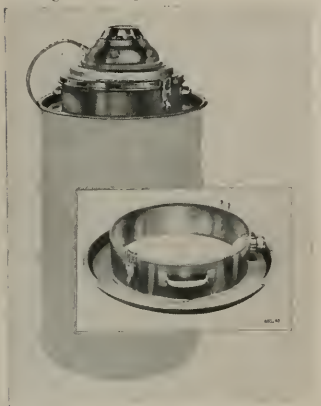
plans and specifications for construction of a new Elementary School to be built in the City of Larkspur.

DRUM CONVERTED INTO VACUUM CLEANER TANK

A new conversion unit which transforms any standard 55-gallon drum into a vacuum cleaner tank is being introduced by the Clarke Sanding Machine Company of Muskegon, Michigan.



The assembly offers the cleaning capacity of a large wet-dry vacuum cleaner at exceptionally low cost. It consists of an air intake and exhaust unit powered by a 1 h.p. motor, inside filter bag, and conversion adapter cover which fits any standard 55-gallon drum. Attaching the unit requires no alterations of the drum; unit is simply placed on open top of drum and held securely by the vacuum.

Additional data from Clarke Sanding Machine Co, Dept. PB, 30 E. Clay Ave, Muskegon, Michigan.

CLARK C. WILLIAMS JOINS ARCADIA

Clark C. Williams of Los Angeles, has been appointed architects' promotion representative for Arcadia Metal Products of Fullerton, California, according to an announcement by Henry E. North, Jr., firm president.

For more than twenty years, Williams has served as sales and promotion specialist for the Southern California Gas Company in the construction and related fields in the Los Angeles area. A native of Portland, Oregon, he studied business administration at the University of Oregon, and is a resident, with his family, in Torrance.

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ARCHITECT AND ENGINEER

HERBERT SLATER JUNIOR HIGH SCHOOL . . . Santa Rosa, California

J. CLARENCE FELCIANO, Architect

OCTOBER 1956

Residence of Mr. and Mrs. Leo F. Piozza
Binder and Curtis, Architects, San Jose, California

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Vol. 207 No. 1

ARCHITECT AND ENGINEER

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COVER PICTURE

HERBERT SLATER
JUNIOR HIGH SCHOOL

Santa Rosa, California

Outstanding new school building, incorporates all of the newest in modern design of educational facilities.

For further descriptive details of plant see article on page 12.

ARCHITECTS' REPORTS—
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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135 — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco, California, under the Act of March 3, 1879. Subscriptions United States and Pan America, $3.00 a year; $5.00 two years; foreign countries $5.00 a year; single copy, 50c.

. EDITORIAL NOTES .

A CHANCE TO ACT

This is a "political" year.

A "political" year is a combination of ambition and hope. Ambition for those who seek election to some office, and greater strength for those who utilize the functions of government for perpetuating themselves in public office, or strengthening their hold on their present jobs as "servants" of the people.

Hope stems eternal in many that a "political" year is the opportunity to make certain changes in governmental representatives, to toss out the incompetent do-nothings, and replace them with persons presumed to be "representative" of the voter.

Any election is an opportunity to make changes, and it is the personal responsibility of every citizen to carefully view the qualifications of anyone who presumes to "represent" you in government. Whether it is a "political" year, or just an election, it's your only opportunity to have a say in what goes on in government. If you're not registered, do so at once—execute your constitutional franchise as an American, and vote —vote for capable and competent representatives, it's your only assurance of Good Government.

* * *

ROADBUILDING MANPOWER

Total highway, road and street construction will provide employment for nearly 900,000 men when the new construction program reaches its high level of execution.

It is expected that by 1960, total highway, road, and street construction will be between $8-billion and $9-billion annually, requiring a monthly average of from 435,000 to 450,000 workers on the site. During the summer months when weather conditions are more favorable for construction operations, the employment figure should reach 630,000 per month. The present average is approximately 300,000.

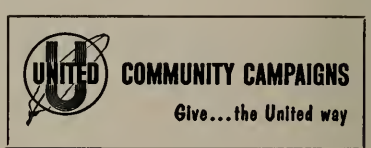
A TIME TO GIVE

No individual, no family, no community is immune to trouble. A child is stricken by a crippling illness, a heart fails, a cancer cell plays havoc with a once healthy body. A storm or a flood disrupts an entire city. Old people grow lonely, boys and girls become restless.

The new industry, new highway or housing development that means progress for a community can also mean trouble if dislocations or increased population are not accompanied by adequate health and welfare services.

Making certain that those adequate health and welfare services are available in time of need is everybody's business. The tax dollar and the service fee can only reach so far. It is the voluntary social service agency, supported and operated by and for the community that must meet the need.

The time to meet that need is now. In some 2,000 communities throughout the United States and Canada, united community campaigns are now in progress to raise an aggregate goal of more than 340 million dollars. When you are asked to contribute to your town's United Fund or Community Chest campaign, remember that you are giving to many causes . . . both at home and abroad. The need is great . . . the responsibility is yours.



THE appealing little girl, painted by the nationally known artist Stevan Dohanos, symbolizes a need that many persons of all ages feel at some time —a need which any of us may have during our lives, for tender and wise support from someone stronger than ourselves. Periods of stress, weakness, illness or helplessness may and do occur to all. The "united way" provides strong, kindly services and care when needed.

new bathroom ideas

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SOPHISTICATED and luxurious ideas keynote the appeal of this bathroom. The spacious counter is tiled in Hermosa Dura-Glaze Pink Dust. Floor is striped Celadon Green and White Dura-Glaze. The shower wall is decorated with Fisherman's Wharf on Pink Dust background.

LOOKING for added convenience? Plan for **two** basins. Select Hermosa Tile to compliment this popular bathroom feature. Hermosa offers more colors, more decoratives to choose from... combines beautifully with other building materials — brick, glass, wood, stucco, etc.

STYLE with California Coordinates to add luxury to small-space bathroom design. California Coordinates — matching custom design wallpaper and decorative tile inserts — is another Hermosa exclusive.

PLANNING for children? Combination washer-dryers offer many benefits when designed in a bathroom combination counter unit. This family design advantage is typical of the versatile ways Hermosa Tile helps homes have much-admired distinction.

NEWS and COMMENT ON ART

OAKLAND ART MUSEUM

The Oakland Art Museum, S. W. Corner, Municipal Auditorium, Tenth and Fallon streets, opens the autumn season with a special East Bay Artists Inaugural Exposition. This is the first exhibition and paintings presented by this group, organized to include leading Bay Area Artists in a variety of styles.

The Art Rental Service is previewing a showing of new selections of painting and sculpture, with rentals open to the general public.

Starting October and continuing through November 2, special displays will be presented in a Holiday Decorations Program. Other special activities include classes in the History of Art in California, Life Drawing and Painting, Painting and Design, Introduction to Oil Painting, the Teenage Workshop, Family Workshop, and adult classes in Landscape Painting and Casein Workshop.

The Museum is open daily.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is offering a number of special exhibits and events for October including:

SPECIAL EXHIBITIONS—Paintings by Enrico

(See page 22)

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING CIVIC CENTER

WOMAN IN AN ARMCHAIR

(Bronze Sculpture)

25⅝ x 20½ x 15¾"

BY

ROBERT COUTURIER

(French Contemporary)

ART FROM FRANCE

Special exhibition, October 23 - December 9.

First major exhibition of the autumn season—a report on painting, sculpture and prints in Paris today, selected by Jean Cassau, Chief Curator of the National Museum of Modern Art, Paris. It is supplemented by examples of works of these artists and others borrowed from United States collections.

TYPICAL STREET VIEW

A CITY PLANNED FOR COUNTRY LIVING

BROOMFIELD HEIGHTS

Denver, Colorado

J. ROGER MUSICK, A.I.A.

Architect

How much does it cost to convert five square miles of rolling Colorado land at the foot of the Rocky Mountains into the state's fifth largest city?

This question faced the Turnpike Land Company when it conceived Broomfield Heights north of Denver. It was to be a complete, modern community,

RETAIL SHOPPING CENTER

Designed to serve eventual population of some 30,000 residents of the community.

DINING AREA—typical port of the living room set aside for formal or informal use. Living room carpeting extends over entire floor.

BELOW: Architect's rendering of an area set aside for office buildings and specialized activities.

offering suburban living with every convenience found in a large, established city.

Today Broomfield Heights is a reality. By 1960 its developers expect it to contain 8,000 homes and some 30,000 residents — Colorado's fifth largest city.

The city has its own water supply and has built a sewer system and treatment plant. Streets and building lots are laid out according to a master plan. A broad strip of land bordering a sparkling stream runs through the center of the community. This will be a park.

And the developers have built three cottage schools to educate Broomfield Heights' youngsters until the local school district can plan and build permanent schools. Nine more temporary schools will be provided as they become necessary.

The community will have its own fire and police protection, a large commercial area with stores, offices and space for other standard services.

Four churches have already bought land in the area to answer the community's spiritual needs.

More than 400 acres are laid out adjacent to the area for a planned industrial development.

Planned Community

Broomfield Heights was a planned community from the start. One of the first moves of the developers was to hire the firm of Harmon, O'Donnell and Henninger, professional planners, to draw up the master plan and engineering program for the city.

Included in the master plan were a retail shopping center and separate area for offices and medical clinics

—called the Garden Office Center.

The developers then hired Architect J. Roger Musiek to design the buildings in the two centers to fit the overall planning program.

The site lies 17 miles and 17 minutes north and west of downtown Denver on the four-lane Denver-Boulder Turnpike.

The development company soon had its answer about the cost of building a city from the raw land.

Before the first house could be built, the cost totaled $2,860,000 in water, sewage, lights, streets and planning.

Five prominent Denver businessmen formed the parent company: K. C. Ensor, President, K. C. Ensor Construction Co.; Bal F. Swan, President of the Empire Savings and Loan Association; Aksel Nielsen, head of the Title Guaranty Co.; Roger D. Knight, President of the U. S. National Bank; and John J. Sullivan, managing partner, Bosworth Sullivan & Co., investment bankers.

The first 640 acres of land cost $320,000.

Adequate Water

Water is precious in Colorado and difficult to find, so insuring an adequate water supply was a first concern. The developers purchased the Great Western Reservoir, a 320-acre body of water five miles from the new city site. The reservoir holds 650,000,000 gallons, and to feed it the Company purchased water rights on two mountain creeks.

Water cost $250,000. An additional $450,000 was

LARGE LIVING ROOM WINDOWS

spent in water storage, treatment and pipe lines to deliver to the project site. This included 91,564 lineal feet of 16 and 18 inch pipe. The distribution system in the first section of the city will cost another $400,000.

For storage of water from the reservoir, one 775,000 gallon tank has been built and another will be needed by the time the first 2,000 house phase of the project is reached.

Utilities

A sewage treatment plant has been built three miles

(See page 34)

HOMES ore designed for comfortable living . . . the interior view above and on opposite page are of this particular residence.

CHURCH ENTRANCE . . . parking area from driveway at right.

FIRST CHURCH OF CHRIST, SCIENTIST

Laguna Beach, California

PAUL ROBINSON HUNTER
Architect

STRICKER CONSTRUCTION CO.
General Contractor

Principal Church Area . . . detail.

This church and Sunday School is located on a wooded hillside in a residential neighborhood, and overlooks a beautiful stretch of the Pacific Ocean. The requirements of the owner were simple: A church auditorium seating 42 with a foyer large enough for overflow attendance; a Sunday School for about 30 classes; necessary administrative facilities, and as large a parking lot as possible.

The construction materials are likewise simple: Wood frame plastered, shingle and composition roofs with broad overhangs and brick walls and steps. There is some wood panelling on the interior. Heating is supplied by a forced air system.

The color scheme of the building and furnishings was under the direction of the architect. The exterior plaster is a light yellow green with oiled Redwood trim and golden ruffle brick. The interiors are, in the main, a soft yellow with bleached mahogany woodwork. The carpeting of the auditorium is a deep

FOYER ENTRANCE

Design detail of entry into main Auditorium, plaster ceilings, carpeted floors.

brown, the seat upholstery gold, and the windows a bronze glass with small accents of pure yellow, red, blue, purple and green.

Principal entrance to both the church and the Sunday School is approached across brick terrace. Wide overhanging roof shelters two story glass wall at lobby. Sunlight floods the main lobby, which serves as a link between church auditorium, administration, and Sunday School areas. Although the Sunday School is on floor above the main level, the sharp slope of terrain has been utilized in providing children with

(See page 27)

MAIN AUDITORIUM . . . combined clear and stained leaded glass windows.

Detail View
of the
Corridor

HERBERT SLATER
JUNIOR HIGH SCHOOL

Santa Rosa,
California

RAPP, CHRISTIANSEN & FOSTER
General Contractors

INTERESTING WORK OF A
WESTERN ARCHITECT

Santa Rosa, California

J. CLARENCE FELCIANO, Architect
& Associates

Albert Mihaly (left)
J. Clarence Felciano
John D. Royce, Jr.

UNIQUE Ranch-Type Office of the Architect in the South Santa Rosa foothills.

BELOW is shown Locker Room of the Herbert Slater Junior High School.

By FRED N. JONES

It used to be an accepted custom for an architect to maintain his office close in town in order to better serve his clients. Not so any more. The automobile has made it possible for him to get away from the hustle and bustle of the down town area, with its ever increasing parking problems, far enough away to make the office personnel happy and the client unhampered with traffic noises and congestion.

One finds an outstanding example of this get-away-from-the-business-center trend in the unusual and delightful working studio of J. Clarence Felciano, A.I.A., and his associates, John D. Royce, Jr., and Albert Mihly, whose most recent work is pictured on the following pages. This attractive environment must have had something to do in creating these works of art. Approximately 2 miles from the center of down-town Santa Rosa the Felciano ranch type office occupies a

View of the WOOD SHOP

Herbert Slater Junior High School

Santa Rosa

J. CLARENCE FELCIANO, A.I.A
ARCHITECT

SANTA ROSA, CALIFORNIA

ST. HELENA
JUNIOR HIGH SCHOOL

ST. HELENA UNIFIED
SCHOOL DISTRICT

ST. HELENA, CALIFORNIA

ARCHITECT
J. CLARENCE FELCIANO, A.I.A.
4010 MONTECITO AVENUE
SANTA ROSA, CALIFORNIA

ASSOCIATES
JOHN D. ROTCE, JR.
ALBERT WINALT

PASTOR
REV. WM. J. TIERNEY
SEBASTOPOL, CALIFORNIA

SAINT SEBASTIANS
CHURCH & RECTORY

portion of a five acre wooded site in the hills northeast of the Sonoma County seat. Over picturesque winding roads, as one approaches the studio, one feels he is about to enjoy the luxury of a country estate or the restfulness of the better type of vacation resort.

Built among trees and gardens the office has been expanded on five different occasions since the original portion was occupied in 1945. Its overall measurement today is approximately 2500 square feet of floor area, including a 45 ft. long drafting room. The office personnel has been expanded until there are eighteen men, including the principals, involved in the preparation of plans, specifications, job inspection and administration, in addition to two people in clerical personnel.

When the office was first opened it was located in the Bank of America building in down-town Santa Rosa. This was in May, 1939. Due to the building restrictions during World War 2 the office was closed in May 1942 but minor work was carried on, consisting primarily of residences, small commercial projects and temporary school buildings.

When the office was re-opened in June, 1945, the practice consisted of residences, small industrial and

CHURCH INTERIOR . . . detail.

ST. EUGENE'S CHURCH AND RECTORY

anta Rosa, California

D. L. FAULL, General Contractor

DETAIL of ENTRANCE

ST. JOSEPH'S SCHOOL
San Jose, California

O. E. ANDERSON,
General Contractor

Donovan-Universal Windows especially designed for natural lighting and ventilation.

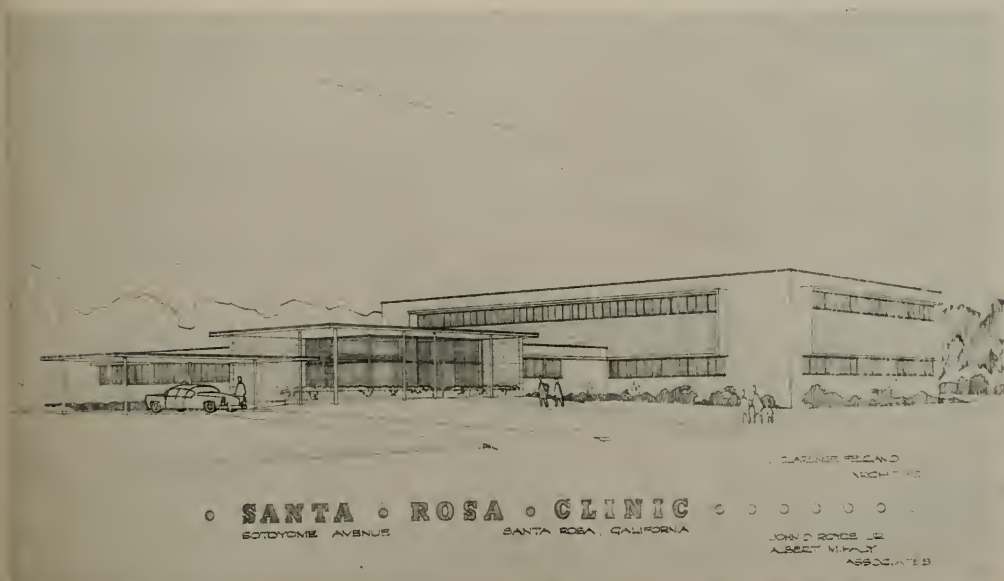
ADMINISTRATION BUILDING . . . County of Sonoma, California

commercial buildings, schools and public buildings. In 1950, residential work and jobs of like nature were eliminated in order to concentrate on schools, public buildings, and some church work, until at the present time, approximately 85% of the volume of work done by the firm is public and private school buildings.

School work has been done primarily in the northern California area from Weaverville in Trinity County to San Jose, Santa Clara County, consisting of small one and two room, rural elementary schools to large junior high and senior high schools and junior college units. Besides schools, public buildings have been designed for counties and cities in the area and for fair grounds.

Private work has consisted of commercial buildings, small industries, medical clinics and medical and dental office buildings. Churches and other ecclesiastical work is also includel in the commissions the firm has received.

The work shown in this issue of Architect & Engi-



GYMNASIUM

DETAIL

ANALY UNION HIGH SCHOOL

Sebastapal,

California

OLSON CONSTRUCTION

COMPANY,

General Contractars

SCHOOL FACILITIES DESIGNED FOR CLIMATIC CONDITIONS

A TYPICAL KINDERGARTEN ROOM

neer is representive of the various projects which have been done and are the result of the contributions of the firm's office personnel in all phases of an architectural practice, including structural and mechanical engineering. In addition to contributions made in structural and mechanical engineering by the firm's office personnel, Graham and Hayes, Structural Engineers, San Francisco, and George K. Brokaw, Mechanical Engineer, San Francisco, have been engaged on many of the major projects.

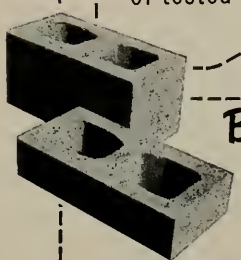
Description of Herbert Slater Jr. H. S.

The Herbert Slater Junior High School is designed to accommodate 1,200 pupils and all facilities are one story structures. The north classroom wing, including administration, the south classroom, music department, cafeteria and shops are wood frame construction. The gymnasium-auditorium including locker rooms, etc., is reinforced concrete.

The classroom wings, including those special facilities such as science rooms, arts and crafts, library, home making, clothing, laboratory, and other special rooms, are designed as double loaded corridor units. One of the main features of the design is the well-lit corridors which also, in effect, give bilateral lighting to the classrooms each side of this corridor. This is

UNIFORM RESULTS

of tested processes



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CITY COUNCIL CHAMBERS

Petaluma, California

B&R Construction Company, General Contractors

PEDERSEN FURNITURE COMPANY
Store Building

Santa Rosa, California

Codding Homes, Inc., General Contractor

Terra cotta lower columns and window spandles.

GUERNEVILLE ELEMENTARY SCHOOL

Guerneville, California

accomplished by a continuous skylight over the corridor for the full length of the two classroom wings. Below this skylight is suspended a wire glass and acoustical plaster ceiling. the wire glass is each side of the acoustical panel which runs down the center, and each classroom has a row of transom windows above door head height for which the light is borrowed from the glass and acoustical plaster ceiling.

The entire project has 99,960 square feet, and was built by the Rapp Construction Company for $1,378,000.00. This included all the buildings, the paved areas—including curb, gutters and sidewalks along the front, the parking area—including curbs, all landscaping—including lawns, sprinkler system, shrubs and trees, a complete fire detection system tied into the City of Santa Rosa Fire Department, public address system, interphone system, student lockers in the corridors, and gymnasium lockers in both the girls' and boys' locker rooms, complete stage curtains, lighting, etc., at the gymnasium-auditorium, and the bleacher installations in the gymnasium, electric score board, basketball backstops and darkening draperies.

All the units of buildings are inter-connected with covered arcades, and so located at the front of the gymnasium-auditorium and at the ends of the classroom wings, so that ten school buses can load and unload with the students not having to get out into the bad weather. The heating system is hot water, radiant, except for the gymnasium-auditorium room proper and the wood and metal shop.

County Administration Building

The Administration Building for the County of Sonoma, which is presently under construction by the Henderson Construction Company of San Francisco, is located northwest, approximately two miles, from the present Sonoma County Court House. The site comprises approximately 47 acres, and plans are to expand the facilities in the future so that ultimately most of the County offices will be at this new location. The Sonoma County Board of Supervisors selected the site

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★ Concrete Aggregates
★ Cement

We are pleased to have supplied building materials on many of Architect Clarence Felciano's projects.

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Phone 2299

A YES VOTE
on
PROPOSITION 4

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VOTE YES
on
PROPOSITION 4

Citizens Conservation Committee for Proposition 4

870 Market **San Francisco**
3107 Wilshire **Los Angeles**

after much investigation and study by the Sonoma County Planning Commission and a citizens' committee.

The site was selected for the following reasons: First of all, County business is not confined to Santa Rosa alone, but includes those other cities to the north, south and east and west of the City of Santa Rosa. In order to provide room for future expansion and adequate parking facilities, this site made these requirements possible.

The building will contain the administrative offices of the Sonoma County Board of Supervisors, including the Board of Supervisors' Chambers, offices for the County Administrator, Purchasing Agent, and the County Counsel, the Sonoma County Planning Commission—including a meeting room for hearings, etc., the Public Works Department which includes the Engineering Department, Road Commissioner, Flood Control, Sanitation Department and Engineering, County Surveyor and County Inspection. Also included in the building is the Sonoma County Recorder's Office and Veterans' Service.

The building is reinforced concrete floors, walls and roof, with aluminum sash, radiant heating system, air conditioning system, suspended acoustical ceilings, slim line fluorescent lighting, metal movable partitions, rubber tile floors with all exterior windows and doors glazed with heat absorbing glass. The building complete is costing just under $1,000,000.00.

The Santa Rosa Clinic

The Santa Rosa Clinic is a two story, wood frame, construction having an area of approximately 25,000 square feet. It is designed for a group of doctors who, under one roof, will have all the specialties of medical practice including laboratories and pharmacy. It is the largest single medical office building in Sonoma County, and is costing approximately $360,000.00.

Analy Union High School Gymnasium

The Analy High School Gymnasium is a reinforced concrete structure containing a gymnasium having a seating capacity of 1,200 with a full size, high school basketball court. It is reinforced concrete, wood roof, laminated arches, building and costs approximately $378,000.00.

The gymnasium is unique in that it is a split level building with the entrance to the gymnasium at the upper level. The gymnasium floor is approximately fifteen feet below the entrance lobby, and gallery. which runs along the south side. Spectators enter the bleachers from the south side from the top down.

The locker and shower rooms are below at the playing floor level and at the athletic field level. The upper floor contains a special exercise room which is used jointly by the boys' and girls' gymnasium classes (the girls having a separate gymnasium adjacent thereto). A concession bar, public toilet facilities and trophy cases are also in the upper floor.

Acoustical treatment in the gymnasium is obtained by spraying asbestos fibers and cement to a one hour plaster board backing. The gymnasium floor proper is lighted by a double row of skylights on the roof, windows to the north, and from the gallery windows to the south, requiring no artificial light except at night.

NEWS AND COMMENT ON ART

(From page 6)

D'Assia, an exhibition in observance of International Museums Week; Panoramic San Francisco, a group of photographs by Gene Wright; Drawings and Watercolors by Charles Gassion, and American Paintings from the Museum Collections.

ACHENBACH FOUNDATION for GRAPHIC ARTS. Showing at the Museum is Prints Pertaining to the World of Music, and on Loan Exhibition at the San Francisco Public Library is a group of Views of Famous Cities by noted printmakers.

SPECIAL EVENTS include an Organ Program each Saturday and Sunday afternoon at 3 o'clock, educational activities offer classes in painting for children each Saturday morning at 1 o'clock.

The Museum is open daily.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, is offering a number of special exhibits and events:

EXHIBITS—Recent work by Harry Bertoia, an exhibition organized by the Smithsonian Institute; Art Today Is International, an exhibit in honor of Unesco's Tenth Anniversary and International Museum Week; Art From France, representing work never before shown here and on exhibit at the recent Illrd Biennial of Sao Paulo, Brazil; the Reginald Marsh Memorial Exhibition, organized by the Whitney Museum of American Art, New York; Evolution of a Dance Drama, photography by Chic Lloyd; and the Autumn Rental Gallery representing art of local artists for rent.

PROGRAMS—Include Lectures, Lecture-Tours of the Museum, Art Discussions, and Art Classes—Adventures in Drawing and Painting, Studio Art for the Layman, and the Children's Saturday Morning Art Clases.

The Museum is open daily.

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, is offering a number of special events and

exhibitions for October, including:

EXHIBITS:—The 17th Annual Exhibition of The Society of Western Artists, a group of oils, watercolors, pastels and graphic arts; Paintings and Drawings by Morris Graves; Paintings by George McNeil, and Sculpture in Iron by David Tolerton.

SPECIAL EVENTS: Classes in Art Enjoyment for adults and children. Exercises in Oil Painting, Painting Workshop for Amateurs, and Seminars in the History of Art are scheduled for the adults, while Picture Making, Art and Nature, and the Art Club are offered children.

The Museum is open daily.

BRITISH ANTIQUE DEALER SPEAKS AT deYOUNG

Cecil Turner, C.B.F., president of the British Antique Dealers Association, and commander of the Order of British Empire, spoke at the H. D. deYoung Memorial Museum in San Francisco recently, on the subject "The Buying and Selling of Antiques."

Turner is one of the foremost authorities in the field of antiques. He assisted in building up the famous collection of furniture and antiques of the late Queen Mary who presented him with her photograph signed "IN APPRECIATION."

ART GALLERIES AT UCLA GIVEN PRIZED TAPESTRY

A prize example of famed Gobelin tapestry has been presented to the Art Galleries at the University of California, Los Angeles, by Dr. and Mrs. Roy M. Van Wart of Los Angeles.

The tapestry, titled "Birth of Bacchus," is based on a design by Le Brun, court painter and art adviser to Louis XIV of France. It will become part of the University's permanent art collection and will be used for instructional purposes in textile design, painting, and art history.

The Gobelin Tapestry Works of France, which is still in existence, was named after a famous family of dyers who established themselves in the Faubourg Saint Marcel, Paris, around the middle of the 15th century. Manufacture of tapestries was added in the 16th century and their reputation for artistry and quality spread round the world.

In 1662 the works was purchased on behalf of Louis XIV and transformed into a general upholstery manufactory in which designs were executed under the direction of Le Brun.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting an exhibition of paintings by: Hall Goldman, Bernique Longley, and Glenn Wessels, through October.

In the Little Gallery, an exhibition of Oils, Watercolors, prints, and sculpture of Cats will be presented.

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UPPER FOREGROUND shows a section of the 20 x 102 foot overhang. Four by eight foot panels of ¾-inch tongue and grooved fir plywood used effectively to eliminate cost of expensive blocking at unsupported panel edges.

500 MAN HOURS SAVED IN WAREHOUSE CONSTRUCTION

Vernon, California

Architect:
KENNETH ACKER

Engineer:
JOHN BLACKBURN

Contractor:
O. H. OLTMANS

Contractor O. H. Oltmans estimated he saved 500 man hours by using tongue and grooved fir plywood on the roof of a big warehouse for the Rosen Meat Company of Vernon, California.

This saving is based on alternate specifications for 2-inch tongue and groove diagonal sheathing—originally planned for the structure.

"By using fir plywood for the roof diaphram we lightened the entire structure," Oltmans said. "We got substantial additional stiffness from the plywood and this let us economize at the bearings and footings and many other points in the structure."

The building has 16,804 square feet of roof surface

including a 20 x 102 foot overhang. Oltmans used ¾-inch tongue and groove fir plywood panels over 4 x 8-inch rafters 4-feet o.c. Ten penny nails were hammered every 6 inches on panel edges.

Oltmans had the panels plugged and touch-sanded to present a smooth paintable underside for the ceiling. "This is most important," Oltmasn said, "because where you're using a building for meat packing and food processing, a smoothly painted surface is very important for sanitation reasons."

The roof diaphram was covered with a layer of 15-pound asphalted-felt hammered down with 12-gauge nails. Over the hot asphalt, two more layers of felt were laid. A 90-pound mineral surfaced-cap sheet provided the exterior roof surface. The sheet allowed 20-pounds of hot asphalt per 100 square feet.

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS OPEN OFFICE

The International Conference of Building Officials recently opened a Central District office in the Flood Building, 870 Market Street, San Francisco. Hal Colling, managing-director, reports that the new offices will be in charge of John F. Behrens.

ENGINEERING MOVES: Harold Epstein, Engineer, has moved into new offices at 140 So. Orlando Ave., Los Angeles.

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PROPOSED DRILLING ISLAND

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The Richfield Oil Corporation has awarded a contract, and work will start immediately on the construction of a "drilling island" on the company's 1,175-acre California State Tideland lease which is located offshore from Rincon approximately nine miles west of Ventura, California.

The "island" will consist of an outer ring of breakwater with a land filled center. It will be built in 45-feet of sea water approximately 3,000-feet southwest of Punta Gorda. Total area of the man-made structure will be about three acres at the water line. The net working area will be slightly more than one acre. A small boat dock will be constructed on the east side to accommodate craft carrying crews and supplies.

While it is planned to drill at least 70 wells from the island, well heads and producing equipment will be concealed and will not be visible from the mainland. Portable drilling masts will be used during the development program and there will be no permanent derricks on the island. Palm trees and shrubbery will be planted to give the appearance of a natural island.

SUMMER ENGINEERING PROGRAMS CLOSE AT UNIVERSITY CALIFORNIA

Two pioneering programs in nuclear energy for industry were conducted this summer at the University in Berkeley with more than 100 engineers and administrators from all parts of the world in attendance.

A one-week "Nuclear Engineering Survey" was given in July for executives in business and industry. Some 61 participants attended lecture, demonstration and discussion sessions comprising a non-technical survey of nuclear science and its applications in industry.

A "Nuclear Engineering Short Course" for engineers and scientists in administrative positions was conducted July 2 to August 31. Engineers from all over the U. S. and from Germany, Austria, Mexico, and Brazil received nine weeks intensive training in mathematics, nuclear physics, reactor materials, reactor heat and mass transfer, nuclear reactor control and instrumentation, neutron physics, reactor physics, reactor systems analysis, and nuclear process and equipment.

Field trips were made to the University of California Radiation Laboratory installations in Berkeley

and Livermore. Members of the teaching staff were chosen from the faculty of the U. C. College of Engineering and the Radiation Laboratory. Guest lecturers included Edward Teller, professor of physics; Glenn T. Seaborg, professor of chemistry; Morrough P. O'Brien, Dean of the College of Engineering; Arthur T. Biehl, lecturer in mechanical engineering; Jerome Kohl, chief engineer at the Tracerlab in Richmond; John Gofman, professor of medical physics; Ed. J. Lesham, Atomic Energy Division, American-Standard Corporation; and Mark Mills, head of the Division of Theoretical Physics at the Livermore Radiation Lab.

Administrative Director for the program was Kenneth L. Downes, Jr., Principal Extension Representative, Engineering Extension. Richard M. Fulrath, associate in engineering, served as academic program coordinator.

CHURCH

(From page 11)

separate on-grade exit at other end of building.

Wood grill covers organ loft at front of auditorium. On the north, a group of frosted glass doors opens toward landscaped patio. Folding baffles in the Sunday School assembly room are made of birch hollow core doors. Entire floor area can be opened, or class alcoves adapted by swinging baffles against wall.

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SOUTHERN CALIFORNIA CHAPTER

The October meeting was devoted to a general discussion of the general activities of the California Council of Architects and the problems created by State Bureaus, and the current situation with regards to practice of architecture in California and various legislation.

Speakers included: John Lyon Reid, San Francisco, president of the California Council of Architects; Wm. Glenn Balch, Los Angeles, CCA vice-president; Lee Kline, Pasadena, CCA secretary; Albert B. Thomas, Sacramento, CCA treasurer, and Frank Treseder, architect of San Jose.

OREGON CHAPTER

Members were recently asked to contribute detailed information regarding themselves and their business which might be used in an effort to further the practice of architecture throughout the State.

Information gained from a comprehensive questionnaire is to be cataloged and classified so that Chapter and allied interests may have a complete record of member qualifications.

WASHINGTON STATE CHAPTER

The Chapter Bulletin came out in new format last month as a result of the Publications Committee's effort to have the monthly record multilithed.

Among material published was a complete list of all

Directors: David Vhay, Edward S. Parsons, M. DeWitt Grow, John Crider, Lawrence Gulling. Office of President, 131 W. 2nd St., Reno.

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Producers' Council — Northern California Chapter (See Special Page)

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Chapter Committees for 1956-1957, their chairmen and members.

Recent new members include: Ronald R. Campbell, Stephen M. Dam, Kenneth M. Piper, David A. McKinley, Jr., and Austin K. Van Dusen, ASSOCIATES. JUNIOR Members — Ernest W. Greene, Charles E. Morgan, Gordon B. Varey, Ralph G. Olson, Jr., Robert S. Smith, and Ernest F. Wright.

ORANGE COUNTY CHAPTER

"Tile Manufacturing and Quality Control" was the subject of a motion picture recently shown to members, through courtesy of the Pomona Tile Company.

"Cost vs. Maintenance" was the subject of the School Forum meeting on October 6, in Orange Coast College.

PASADENA CHAPTER

The October meeting represented the 100th dinner meeting of the Chapter and was devoted to a program of Travel. Members Kenneth Nishimoto gave a movie travelogue of his recent visit to Japan, and Kenneth Kruger gave a motion picture account of his recent trip through Europe.

CENTRAL ARIZONA CHAPTER

The September meeting represented a steak fry, dancing, and entertainment at the Ramada.

Ralph Haver, chairman of the Nominating Committee announced that the annual election of officers for the Chapter would be held at the October meeting.

Recent new members include: Francis W. Bricker, Matthew E. Trudelle, CORPORATE; Ralph L. Wyatt, ASSOCIATE; and Phillips R. Brooks, Jr., Milo L. Crawford, Dom Martino, and Edgar O. Wagner, JR. ASSOCIATES.

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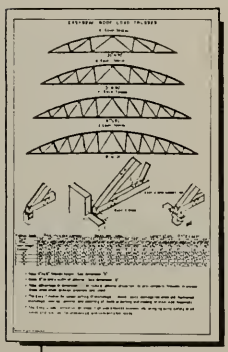
STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

President Walter L. Dickey presented a technical paper on the subject of "Reinforced Brick Masonry" at a recent meeting of the Building Research Institute of the National Academy of Sciences in Washington, D. C. The paper was one of several on the subject of masonry, and it supplied evidence of the leadership in structural design by the West Coast in general and the San Francisco area in particular.

Walter L. Dickey and Clarence E. Rinne have been named to represent the SEANC as delegates to the State Association.

Henry J. Degenkolb and Wesley T. Hayes have been appointed to serve as SEANC representatives on an American Institute of Architects committee to advise public bodies in the San Francisco Bay Area on matters pertaining to planning and civic development.



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PLASTIC DESIGN IN STRUCTURAL STEEL

A one-day Conference will be held at 540 Powell Street, San Francisco, November 14, under auspices of the Division of Civil Engineering, University of California in cooperation with the Structural Engineers Association of Northern California and the American Institute of Steel Construction.

Speakers on technical subjects will include: Professor Lynn S. Beedle, Lehigh University; Professor Jack Benjamin, Stanford University; Professor John A. Bonnell, University of Nevada, and Theodore R. Higgins of the AISC. Professor Egor P. Popov, University of California, will serve as chairman of the conference.

FEMINEERS

"Dramatize the Ordinary — Glamorize the Necessary" was the subject of a meeting of the FEMINEERS in the Elks Club, San Francisco, this month.

Eda Edson of Hollywood was the principal speaker. She is author of "The World Is Your Stage," and is Drama Consultant to Broadway and Hollywood stars, and a teacher of self improvement.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

Behavior of tall structures under earthquake loadings formed the basis for an extremely interesting talk by Dr. George Housner at the October meeting. Dr. Housner, Professor of Applied Mechanics at the California Institute of Technology, is one of the world's foremost authorities on this subject, having devoted

Barbara Counties Branch, Robert L. Ryan, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

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Society of American Military
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much time and effort in basic research within the field. He is currently president of the Earthquake Engineering Institute in addition to his other duties. Studies in this field are of great importance in view of the current proposal to remove the present height limit for buildings in the Los Angeles area.

Perhaps the greatest difficulty in this field has been in obtaining sufficient records of strong ground motion on various types of soil, and much discussion has taken place regarding the effects of the type of foundation material on building response. Dr. Housner described the results of an investigation on a multistory concrete building in Hollywood built with a pile foundation due to the characteristics of the soft ground on the site.

Two instruments to record earthquake ground motion were installed—one in the basement, and a second 112 feet away from the building in a parking lot. Measurements were obtained during the Tehachapi earthquake of 1952 and studies made based on these records yielded some important information.

Appearance of the acceleragraph curves from the two locations was quite similar in both N-S and E-W components of the motion. However, the response of the building and the resulting strains within the structure were found to vary for the two motions. The particular building selected was nearly ideal for study due to the arrangement and simplicity of the lateral force resisting elements. In the long direction loads were resisted by two exterior solid concrete walls, and the building had a measured period in this long direction of approximately ½ a second due to these stiff elements. In the transverse direction two narrow end walls with regular opening patterns resulted in a 1 second period.

By calculating the response of this building to the recorded ground motions it was found that the degree of damping was a critical factor and that the so-called "cushioning" effect of soft ground was not effective in reducing the lateral loads on the building.

From these studies another interesting conclusion was drawn concerning the length of the building as relating to the length of waves in the ground carrying the earthquake disturbance. When the building length approaches the length of such a seismic wave it becomes apparent that the effect on the structure is lessened due to the "ironing out" of the wave motion. It is probable that with extremely long buildings, of say twice the seismic wave length, that major forces

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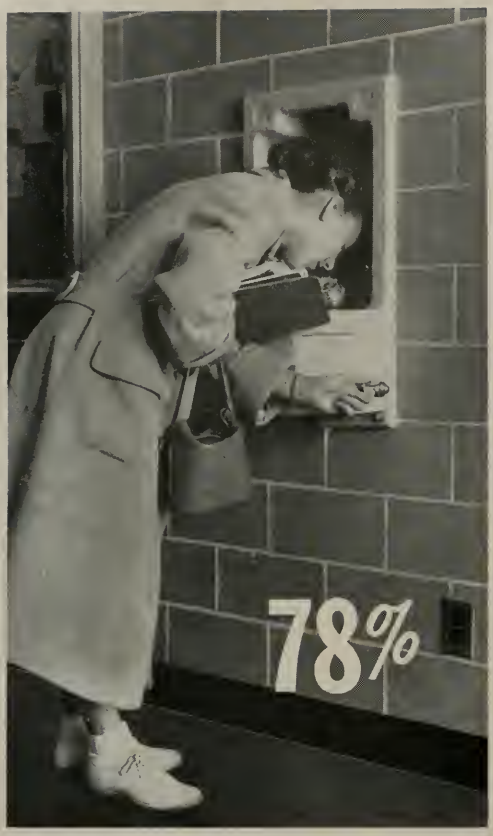
tending to tear apart or push together one portion of a building with respect to the other would be operative.

A second series of investigations was conducted on cracking towers in Kern County after the 1952 earthquakes. These structures were ideal for study, for they consisted merely of a vertical cylindrical steel cantilever out of a concrete foundation. Connection to the foundation was made by a ring of anchor bolts to the base plate, and few pipes connected at the top of the towers to resist their free movement in response to the earthquake motion.

The third series of investigations discussed by Dr. Housner covered analysis of tall building frames to known earthquake motions, and was chiefly concerned with the distribution of lateral force shears throughout the height of the building. Of particular significance as a result of these studies was the indication that should the current Los Angeles Building Code formula for lateral shears be extended to include higher structures than those presently allowed in the Code—say of 20 or more stories—the resulting shear distribution would be too high in the top stories and too low in the bottom stories.

PHOTO CREDITS: Morley Baer, Cover, Page 12 (top), 13 (center and bottom), 15, 16, 18, 19, 20; Turnpike Land Company, Page 7, 8, 9; Unruth Studio & Camera Shop, Page 12 (bottom), 13 (top), 14, 17; Paul Robinson Hunter AIA, Page 10, 11; Kenneth Acker, Architect, Page 24; and John A. Blume, Engineer, Page 26.



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ARCHITECTS MOVE INTO NEW OFFICE

The architectural firm of Kaestner & Kaestner, Architects Associated, recently announced the opening of new offices in the Black Building, Suite 5, 1115 Eye Street, Modesto, California, where they are engaged in the general practice of architecture.

TRANSPORTATION UNDER STUDY AT NORTHWESTERN

A study of the basic problems of the transportation industry will begin October 5, when the Transportation Center at Northwestern University, Evanston, Illinois, launches its national program of research, education, and service.

Fred G. Gurley, president of the Atchison, Topeka and Santa Fe Railway, will serve as Chairman of the Center's Advisory Committee.

Organized specifically to meet the need for a fresh and integrated approach to transportation problems of steadily increasing complexity, the Center represents a new phase in industry-university cooperation. With substantial support from all segments of America's transportation system, railroads, airlines, ocean and inland waterway shipping lines, pipelines, and highway transport, the new Center will operate within the administrative framework of Northwestern.

MEDICAL BUILDING

Harold C. Wildman, Architect, 3701 Atlantic Avenue, Long Beach, is completing drawings for construction of a frame and stucco medical office building in the 3000 block on Atlantic Avenue, Long Beach for Drs. Vernon and Earl Brickey.

The building will contain 3,200 sq. ft. of area; composition and gravel roof, concrete slab, and a black-top paved area for patient parking.

COLLEGE CHURCH BUILDING

The firm of Farrar, Hudson & Associates, 661 Highway 99, San Bernardino, are completing drawings for construction of a 2-story, reinforced concrete, masonry and frame building at the campus of the College of Medical Evangelists, Loma Linda, for the Board of Trustees of the College.

The Church will comprise 44,000 sq. ft. area in chapel, sanctuary, classrooms, business offices and storage rooms.

NEW JERUSALEM ELEMENTARY SCHOOL

The firm of Ernst & Lloyd (John C. Lloyd, architect), 2132 N. El Dorado Street, Stockton, is completing drawings for construction of a new Jerusalem Elementary School, in New Jerusalem (California), San Joaquin County, for the School's district board of trustees.

The new facilities will contain classrooms and will be of frame and stucco construction.

SHOPPING CENTER

Robert D. Miller Associates, Edward B. Hendricks, architect, 4224 Luther Street, Riverside, are working on drawings for construction of a complete new shopping center to be built at Magnolia Center, Riverside.

The shopping center will contain 25,000 sq. ft. of area; tilt-up concrete construction with tapered beams, and facilities for a super-market, shops and miscellaneous stores.

AMERICAN LEGION MEETING HALL

The firm of Ernst & Lloyd, John C. Lloyd, Architect, 2132 N. El Dorado Street, Stockton, is working on drawings for construction of a 1-story, concrete block and frame American Legion building in Stockton for the Stockton American Legion.

Estimated cost of the project is $65,000.

RADIO ASTRONOMY OBSERVATORY

Architects Pereira & Luckman, 9220 Sunset Blvd., Los Angeles, have completed drawings for construction of a 4,000 sq. ft. frame and stucco observatory near Bishop. In addition to the observatory facilities will be built for sleeping accommodations, offices, electronic workshop, all purpose shop, kitchen and dining room.

P. C. CHRISTENSEN NAMED MANAGER

P. C. Christensen has been appointed District Sales Manager of the San Francisco office of the Truscon Steel Division of Republic Steel, according to a recent announcement.

He succeeds Hal Waller who has been appointed district sales manager of the firm's Houston, Texas, office.

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BROOMFIELD HEIGHTS

(From page 9)

east of the city, served by 18 and 20 inch lines. The plant, outfall line and collection system run the cost up another $400,000.

Planning, layout and engineering cost $50,000. This includes drainage through massive land planning, but the graceful, rolling terrain has not been changed except for engineering improvements.

Fourteen miles of street will cost $770,000. This includes cut, fill, grading, curb and gutter, sidewalk and blacktop paving.

Promotion, advertising and developments have increased the cost another $170,000.

Schools

The Company has spent $42,000 for three cottage schools, each to accommodate 80 pupils, until the local school district builds large, permanent schools for the ultimate child population. The developers also are providing a police and fire station to be manned according to need as the city grows.

Two large public school sites, 10 and 13 acres respectively, have been set aside for permanent development. A total of 25 acres has been given for park and recreation.

Commercial

Land and its development for a large commercial area of 73 acres cost another $300,000. This area will include a beautful shopping center at the southwest corner of the city. Stores will carry a complete line of merchandise, as well as convenience goods. Planning includes an area for office buildings, insurance firms, bank, savings and loan association, and other vitally needed services such as medical clinics, doctors' and dentists' offices.

For each square foot of retail store area, the builders are providing 10 square feet of off-street parking and an additional area for landscaping, trees and flowers.

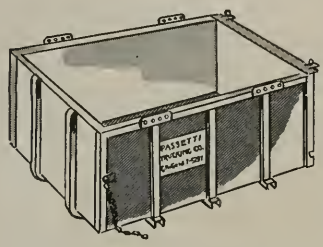
Street lighting provided by the Public Service of Colorado will cost $42 per year per light. The Mountain States Telephone & Telegraph Co. has invested $1 million in capital imprvement, lines and equipment to install a new telephone exchange that went into operation April 10.

Large Project

It will be a $100,000,000 city when it is completed. And that is the most conservative figure. That would be the simple value of 8,000 houses at about $12,000 per house.

But the price on homes begins at $12,500. It will range from there to $35,000.00. And that does not include the value of the stores, office buildings and other facilities that will develop as the city grows.

The first model house was shown on August 21, 1955. The first family moved in the day after Christ-



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mas, 1955. The first cottage school opened shortly thereafter.

By March, 1956, a total of 250 houses had been sold. A total of 300 had been completed or were under construction.

Within two years, the developers expect to reach their first phase goal of 2,000 homes. By 1960, they expect the development to reach the 8,000 home dream, with a complete, comfortable suburban city of 30,000 residents. Eleven builders so far are cooperating in the building venture and offer 32 types of homes plus custom-built homes. Veteran and FHA financing has been secured.

The developers require that all homes be of brick or masonry construction, although wood may be used for trim purposes.

Lots range from 60 to 120 feet frontage. No lot will be sold that contains less than 7,000 square feet. That minimum is higher than neighboring metropolitan Denver.

Buyers have a wide range of home choices, in size, style, construction and architecture — but all conform to the minimum restrictions with emphasis on brick and masonry materials.

Builders who cooperate in the city project buy improved lots from the Company. Improvement includes gas, water and sewer lines, streets, curb, gutter and sidewalk. Lots are sold to the builder at a flat rate of

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$37.50 per front foot. In some cases, a builder may buy a parcel of lots and then re-plat the group to fit the individual house and comply with zoning restrictions. For example, one builder purchased 26 60-foot-front lots, but built only 24 homes. Restrictions allow a minimum 60-foot frontage, except for a 70-foot minimum on street corner lots

Expansion

The Ambrose-Williams Co. Realtors, one of Denver's biggest pioneer developers, is establishing an office in Broomfield Heights and will develop the commercial and industrial areas.

The Empire Savings and Loan Association of Denver will set up a branch costing $175,000. The Valley Bank & Trust Company, capitalized at $350,000 and established by northern Colorado investors, will also be located in the Garden Office Center.

Every home buyer in Broomfield Heights receives with his property a share in the Broomfield Heights Mutual Service Association which has built and will maintain the water and sewage systems. These shares become a part of the property itself, and will transfer automatically with the transfer of title to property.

It will be truly a dream city. There will be no unsightly garbage trucks. Every home must have a garbage disposal unit.

Everything the American family needs and wants—location, a mountain view, pleasant surroundings, all municipal services—have been built into Broomfield Heights.

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Hollywood Jr. showing adjustable metal sash.
Hollywood Jr. showing removable sash unit.

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- The Hollywood Jr. Twins permit more light in kitchen and service porches.
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2 Convenience
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- No more sagging, flimsy screen doors which invite intruders.
- Acts as an additional protection for housewife. She may converse with outsiders through sash opening without unlocking the door.
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3 Economy
- Saves buying a Sash, Screen and Storm Door. Hollywood Jrs. are all 3 combined into 1 door.
- Saves on hardware, hanging and painting.
- Saves on expensive replacements.
- Saves space . . . The Hollywood Jr. Twins may be hung to swing in or out. Leaves available floor space which is usually lost in kitchen or entry way.

4 Panel or Flush
- Hollywood Jr. Twins give you your choice of a panel or flush door to harmonize with any style architecture or interior design.
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- Panel doors available in pine only.

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

LEGAL PROBLEMS IN ENGINEERING. By Melvin Nord. John Wiley & Sons, Inc., 440 4th Avenue, New York City 16. Price $7.50.

Written by an engineer who is also a practicing lawyer, this book is designed for use and reference by engineers. It does not pretend to make the engineers independent of lawyers, but will help them to avoid legal problems before they arise and to work more effectively with lawyers if they do.

The book is broader in its scope and coverage than any other work and deals with almost every legal subject that has any bearing on engineering. A special feature is the treatment of case material used to illustrate discussions and point up the legal problems which may be encountered in given circumstances. There is a minimum of legal jargon and the treatment is particularly valuable to the non-lawyer seeking a concise, reliable survey of the field.

MODERN MARINE ENGINEERING. By D. W. Dudorff, Dipl.Ing., M.Inst.F.,F.R.S.A. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $4.75.

In the years preceding the outbreak of the last war a significant change of direction became evident in the design and construction of passenger liners. Efforts for size and speed began to give way to more economical operation by increasing the efficiency of propulsion plants. This book is a concise review of the various types of propulsion plants employed in the construction of vessels for different services.

WROUGHT IRON—Its Manufacture, Characteristics and Applications. By James Aston and Edward B. Story. 3rd Edition. A. M. Byers Company, Pittsburgh, Pa. Price $1.00.

During the past several decades, there has been a rapidly growing demand for wrought iron in many different products, and this demand has been accompanied by a need for information on the qualities of the material and their application to present day problems. The authors, James Aston, Consulting Metallurgist, and Edward B. Story, Chief Metallurgist, of the A. M. Byers Company, have dedicated this book to the need of greater information about wrought iron and for the sake of clarity many photographs have been used.

ARCHITECTURAL CONSTRUCTION — The Choice of Structural Design. By Theodore Crane. John Wiley & Sons, Inc., 440 4th Ave., New York 16. Price $10.00.

Since the first edition was published in 1947, economic conditions in the building industry have caused many important changes. This edition offers a comprehensive view of the more useful types of construction and the newer features of building design available in the United States today. It describes contemporary fireproofing, details for steel assemblies and similar practical considerations as well as startling designs utilized in modern coliseums and hangars. It also serves as an excellent reference and guide book.

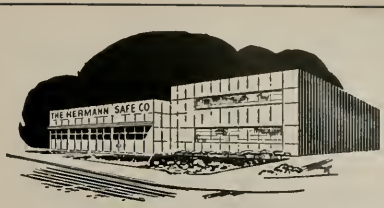
NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Central station air conditioning. New 52-page, 2-color, Data Book is designed chiefly to aid architects and engineers in selecting the correct size central station cabinet type air units for any type installation; saves valuable time and considerable expense as data eliminates complicated figuring and guesswork; indexed book illustrates pictorially various vertical and horizontal unit models available and lists outstanding engineered design features. Free copy write DEPT.-A&E, Climate Chart, Advertising & Sales Dept., Worthington Corpn., Harrison, N. J.

Swimming pool kits. New catalog describes complete ready-to-assemble Sunplay swimming pool kits and swimming pool materials; low prices, easily installed with minimum amount of labor; ideal for residential development projects. Write for free copy, DEPT-A&E, Sierra Mfg. Co., 1719 Mt. Diablo Blvd., Walnut Creek, California.

Cabinet hardware. A new 12-page catalog, describes cabinet hardware featuring new styles of pulls, catches and hinges in



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Fire alarm systems. Catalog gives comprehensive data on municipal fire alarm systems, police signal systems, industrial fire alarm and watch report and supervisory systems; automatic and manual; many illustrations and equipment designs, together with accessory equipment; gives great deal of information and detail of a wide variety of installations and uses. Copy available write DEPT.-A&E, Gamewell Company, Newton Upper Falls 64, Mass.

Vitrified clay conduit systems. New 4-page brochure, illustrated, describes revolutionary new and exclusive Cert-A-Bar Tunnel and Lock-A-Bar Round Systems, and many features of Stillwater conduits, which assure permanent protection for piping; Authorative information on conduit design, installation, engineering, insulation, waterproofing specifications and fittings. Copy available write DEPT.-A&E, Stillwater Clay Products Co., 3334 Prospect Ave., Cleveland 15, Ohio.

Wall-toWall Lighting. New 20-page booklet describes universal applications of Sylvan-Air system of wall-to-wall lighting; details advantages and uses of system featuring 3-way functional treatment of sight, sound and styling; for industrial, commercial and institutional use in retail stores, offices, schools, banks, factories, laboratories, hospitals, art galleries, super-markets, drafting, conference and reception rooms; many illustrations; installation instructions, special design situations, and proper selection. Free copy write DEPT.-A&E, Sylvania Electric Products, Inc., 48th St., Wheeling, W. Va.

Flexible all purpose metal framing. New 78-page, 2-color, general Catalog on UNISTRUT All Purpose Metal Framing; handy reference and guide for anyone concerned with use, specification or purchase; specific engineering services for special applications; excellent for architects, engineer, draftsman, contractor, distributor, purchasing officials. Free copy write DEPT.-A&E, Unistrut Sales of Northern Calif. Inc., 1000 Ashby Ave., Berkeley, Calif.

ARCHITECTS...

Why not get a preliminary cost estimate before completing your final working drawings? . . . It could save you many times the small cost.

LeROY CONSTRUCTION SERVICES
143 THIRD STREET • SAN FRANCISCO, 3 • SUtter 1-8361

ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY MATERIAL HOUSES TO SAN FRANCISCO CONTRACTORS. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage, at least, must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$36.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Faced Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.
Fire Brick—Per M—$111.00 to $147.00. Cartage—Approx. $10.00 per M. Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139 50
6x5½x12-inches, per M	105 00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M F.O.B. Plant	235.30

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5 30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

BUILDING HARDWARE—

Sash cord com. No. 7	$2.65 per 100 ft.
Sash cord com. No. 8	3.00 per 100 ft.
Sash cord spot No. 7	3.65 per 100 ft.
Sash cord spot No. 8	4.35 per 100 ft.
Sash weights, cast iron, $100.00 ton.	
1-Ton lots, per 100 lbs.	$3.75
Less than 1-ton lots, per 100 lbs.	4.75
Nails, per keg, base	$10.55
8-in. spikes	12.45
Rim Knob lock sets	$1.80
Butts, dull brass plated on steel, 3½x3½	.76

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper)	$1.25
Carload lots, in bulk, per bbl.	3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.	
Cash discount on L.C.L.	2%
Trinity White, Medusa White, Calaveras White	1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Besalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd.	$7.75
⅜-inch to ¼-inch, per cu. yd.	7.75
No. 6 to 0-inch, per cu. yd.	7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $10.00 per square.
Membrane waterproofing—4 layers of saturated felt, $12.00 per square.
Hot coating work, $6.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$20 to $25 per outlet for conduit work (including switches). Knob and tube average $9.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.25, clay or shale, $2.00 per yard. Trucks, $35 to $55 per day.
Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $275 installed on new buildings; $325 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $1.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼	½x2	⅜x2	¼x2
Clear Otd., White	$425	$405	$	$
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
⅝ x 2¼	390.00	381 00
⅝ x 2¾	375.00	355.00
⅝ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

⅜ x 2¼ First Grade	$390 00
⅜ x 2¼ 2nd Grade	365.00
⅜ x 2¼ 2nd & Btr. Grade	375.00
⅜ x 2¼ 3rd Grade	240.00
⅜ x 3¼ 3rd & Btr. Jtd. EM	380.00
⅜ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Abor bing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—Installed

Furnaces—Gas Fired

Floor Furnace, 25,000 BTU	$42.00- 80.00
35,000 BTU	47.00- 87.00
45,000 BTU	55.00- 95.00
Automatic Control, Add	39.00- 45.00
Dual Wall Furnaces, 25,000 BTU	72.00-134.00
35,000 BTU	149.00
45,000 BTU	161.00
With Automatic Control, Add	45.00-161.00
Unit Heaters, 50,000 BTU	215.00
Gravity Furnace, 65,000 BTU	210.00
Forced Air Furnace, 75,000 BTU	342.00

Water Heaters—5-year guarantee

With Thermostat Control,	
20 gal. capacity	96.00
30 gal capacity	112.00
40 gal. capacity	135.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(1") ..... $41.60 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S—Standard, O.P. or D.F., per M. f.b.m. $107.00
Rough, Standard O.P. or D.F., per M. f.b.m. 105.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & 8tr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $100.00
½-inch, 4.0x8.0-SIS 150.00
¾-inch, per M sq. ft. 210.00
Plyform 87.00

Shingles (Rwd. not available)—

Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.

Average cost to lay shingles, $6.00 per square.

Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25

¾" to 1¼" x 24/26 in split resawn, per square 17.00

Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—

Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50

Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).

Double hung box window frames, average with trim, $12.50 and up, each.

Complete door unit, $15 to $25.

Screen doors, $8.00 to $12.00 each.

Patent screen windows, $1.25 a sq. ft.

Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.

Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.

Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.

For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard $ .75
Three-coat work ..... per yard 1.00
Cold water painting ..... per yard 25c
Whitewashing ..... per yard 15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)		Wholesale Raw	Boiled
Light iron drums	per gal.	$2.28	$2.34
5-gallon cans	per gal.	2.40	2.46
1-gallon cans	each	2.52	2.58
Quart cans	each	.71	.72
Pint cans	each	.38	.39
½-pint cans	each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)		Pure Gum Spirits
Light iron drums	per gal.	$1.65
5-gallon cans	per gal.	1.76
1-gallon cans	each	1.88
Quart cans	each	.54
Pint cans	each	.31
½-pint cans	each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil

Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$ ....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch ..... $2.50 lineal foot
8-inch ..... 3.00 lineal foot
10-inch ..... 4.00 lineal foot
12-inch ..... 5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	3.50
Keene cement on metal lath	4.00
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.00
Ceilings with ¾ hot roll channels metal lath plastered	4.50
Single partition ¾ channels and metal lath 1 side (lath only)	3.00
Single partition ¾ channels and metal lath 2 inches thick plastered	8.00
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	5.75
4-inch double partition ¾ channels and metal lath 2 sides plastered	10.00
Thermax single partition; 1" channels; 2¼" overall partition width. Plastered both sides	7.50
Thermax double partition; 1" channels; 4¾" overall partition width. Plastered both sides	11.00
3 Coats over 1" Thermax nailed to one side wood studs or joists	4.50
3 Coats over 1" Thermax suspended to one side wood studs with spring sound isolation clip	5.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$2.50
3 coats cement finish, No. 18 gauge wire mesh	3.50

Lime—$4.00 per bbl. at yard.
Processed Lime—$4.15 per bbl. at yard.
Rock or Grip Lath—⅜"—30c per sq. yd.
⅝"—29c per sq. yd.
Composition Stucco—$4.00 sq. yd. (applied).

PLUMBING—

From $250.00 - $300.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $15.00 per sq. for 30 sqs. or over.

Less than 30 sqs. $16.00 per sq.

Tile $40.00 to $50.00 per square.

No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25

5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50

5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25

4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00

Re-coat with Gravel $5.50 per sq.

Asbestos Shingles, $27 to $35 per sq. laid.

½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00

¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00

1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00

Above prices are for shakes in place.

SEWER PIPE—

C.I. 6-in. to 24-in. B. & S. Class B and heavier, per top $99.50

Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 8-in. ..... $ .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41

Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. 1.85

STEEL—STRUCTURAL—

$325 & up per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs. $8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs. 7.80
½-in. Rd. (Less than 1 ton) per 100 lbs. 7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs. 7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton) 7.15
1 in. & up (Less than 1 ton) 7.10
1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored	$ .17
12 x 12, each	

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Nilas Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: O'Keefe's, 55-11th St., UN 3-4445
Portland: Beaver Sheet Metal & Roofing Co., 924 N. Russell St., TR 6766
Seattle: Teclar Aluminum Co., 625 Yale Ave N., SE 8494
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd South, Salt Lake 4-4431
Phoenix: Baker-Thomas Co., 300 S. 12th, Phoenix 4-5503
Tucson: Laing-Garrett Co., 19 S. Tyndall Ave., TU 2-2893
Albuquerque: Welch-Irwin Corp., 1726 Lomas Blvd. NE.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

CONSTRUCTION SERVICES (11a)
LE ROY CONSTRUCTION SERVICES
San Francisco, 143 Tird St., SU 1-8914

DECKS—ROOF (11b)
UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)
THE BILCO COMPANY
New Haven, Conn.

Electric Doors
ROLY-DOOR SALES CO.
San Francisco, 5976 Mission St., PL 5-5089

Folding Doors
WALTER D. BATES & ASSOCIATES
San Francisco, 693 Mission St., GA 1-6971

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Spokane: Realty Bldg., MAdison 6175
San Diego: 514 Spreckels Bldg., BEImont 4-6082
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

INTERCEPTING DEVICES (10a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3142

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)
KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., POrtsmouth 7-6760

METAL FRAMING (22b)
UNISTRUT SALES OF NORTHERN CALIFORNIA
Berkeley: 1000 Ashby Ave., TH 3-4964

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
W. P. FULLER COMPANY *(16)
Paint

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

ROOF TRUSSES (30a)
EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (31)
GLADDING, McBEAN & CO. *(3)

SHADES (31a)
SHADES, Inc.

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

SWIMMING POOL FITTINGS (34a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143

POOLS
SIERRA MFG. CO.
Walnut Creek, Calif.: 1719 Mt. Diablo Blvd.

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McMEAN & CO. *(3)
KRAFTILE
Niles, Calif.: NIles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

TRUCKING (36a)
PASSETTI TRUCKING CO.
San Francisco 3: 264 Clementina St., GA 1-5297

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WEATHERSTOP
TECON PRODUCTS, LTD.
Vancouver, B.C. 681 E. Hastings St.
TECON PRODUCTS, INC.
Seattle 4, Washington 304 So. Alaskan Way

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.175	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	B2.86	B2.86	C2.835	B2.86	O2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5675	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
O $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1, 1955
K $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%v	1%P; 4%v	1%P; 4%v	1%P	1%P	1%P; 4%v	1%P	1%P; 4%v	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw 1cAOM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw 1cAOM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJ18 12½cv; 10cP	10cw 12½cv	10cw 1½cA	10cw 10cP; 1cA	10cw 12½cv	10cw 10cP; 1cA	10cw	10cw 1cA			10cw	10cw	10cw
ROOFER	7½cw 7½cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw	7½cw 5cv	7½cw	8½cw	10cv		8½cw 10cv	7½cw 10cv
SHEET METAL WORKER	7½cw	7½cw 3¼cv	7½cw 3¼cv	7½cw 2%v	7½cw	7½cw	7½cw 7½cv	7½cw 4%v	8½cw 6½cv	8½cw 6½cv	8½cw	8½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP 12½cv; 2½cJ18	10cw 1cA	10cw 1cA	10cw 10cP; 1cA	10cw 12½cv	10cw 10cP; 1cA	10cw	10cw 1cA			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%PROM				

ATTENTION: The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; J18—Joint Industry Board; Prom—Promotion fund.

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FURNITURE—Fine furniture finishing and exceptional wood working. Theodore H. Peterson, 15 Shaver, San Rafael, Calif. Phone GLenwood 3-7335.

DIVORCEE, 29, seeks pen-pal who is single, Christian, registered Engineer or Architect, 40-50 years. Is 5' 3½", 119 lbs., affectionate, feminine, stylish dresser, entertaining personality, fairly attractive, 3½ years college. Ann Kidd, P.O. Box 972, Santa Barbara, California.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

ELEMENTARY SCHOOL ADD'N., Pacheco School, near Redding, Shasta County. Pacheco Union Elementary School District, Redding, owner. Frame and stucco construction; 3-classrooms, kindergarten, multi-purpose room, kitchen, toilet rooms — $165,843. ARCHITECT: J. Clarence Felciano, 4010 Montecito Ave., Santa Rosa. GENERAL CONTRACTOR: Robert S. Bryant, 1242 Center St., Redding.

VILLAGE OAKS, Elementary School, Stockton, San Joaquin County. Lincoln Unified School District, Stockton, owner. Frame and stucco construction; 6-classrooms, heater room — $109,990. ARCHITECT: Dana D. Corrough, 6725 Pacific St., Stockton. GENERAL CONTRACTOR: Carvers Construction Co., 1870 Lucerne Ave., Stockton.

FACTORY & ADMINISTRATION, Oakland, Alameda County. Marchant Calculators, Inc., 1475 Powell St., Emeryville, owner. Two story factory building; administration building containing 4-stories; reinforced concrete, aluminum and steel sash, composition roofing, 5-elevators — $4,500,000. ARCHITECT: Albert F. Roller, 1 Montgomery St., San Francisco. GENERAL CONTRACTOR: Dinwiddie Construction Co., Crocker Bank, San Francisco.

KINDERGARTEN & ADMINISTRATION, Santa Margarita, San Luis Obispo county. Santa Margarita Union School District, Santa Margarita, owner. Facilities to include kindergarten-classroom building, and an administration building—$32,783. ARCHITECT: John Badgley & Associates, 981 Monterey St., San Luis Obispo. GENERAL CONTRACTOR, Robert E. Walker, 155 S. Alpine St., Arroyo Grande.

TELEPHONE OFFICE BLDG, Compton, Los Angeles county. Pacific Telegraph & Telephone, Los Angeles, owner. 2-Story and part basement telephone office building; 65,000 sq. ft. floor area, structural steel, reinforced concrete and masonry work, built-up roofing, slab, asphalt tile, terrazzo and ceramic tile floors, metal sash, plastering, air conditioning, heating and ventilating, electrical, miscellaneous metal work, paving. ARCHITECT: Woodford & Bernard, 410 N. La Brea, Los Angeles. GENERAL CONTRACTOR: Steed Bros, P. O. Box 350, Alhambra.

ELEMENTARY SCHOOL ADD'N, Dunnigan, Yolo county. Dunnigan Elementary School District, Dunnigan, owner. Frame and stucco construction, 2-classrooms, toilet rooms — $40,968. ARCHITECT: Charles F. Dean, 1521 I St., Sacramento. GENERAL CONTRACTOR: Jay Bailey Construction Co., P. O. Box 148, Woodland.

GIRLS PAROCHIAL HIGH SCHOOL, St. John Evangelist, San Francisco. Roman Catholic Archbishop of San Francisco, San Francisco, owner. 2-Story, reinforced concrete and frame construction; 7-classrooms, administration offices, home making, science, multi-purpose, kitchen, toilet rooms — $353,750. ARCHITECT: Buckley & Houwelling, 166 Geary St., San Francisco. GENERAL CONTRACTOR: Pacific Coast Builders, 1 So. Park St., San Francisco.

OFFICE BLDG, Stockton, San Joaquin county. John Traville, Stockton, owner. 1-Story frame and stucco, some stone veneer, concrete and vinyl tile floors; 4,000 sq. ft. area — $57,862. ARCHITECT: Warren Wong, 2644 Pacific St., Stockton. GENERAL CONTRACTOR: Craft Construction Co., 2812 Sanguinetti Lane, Stockton.

TELEPHONE EXCHANGE, Weott, Humboldt county. Pacific Telephone & Telegraph Co., San Francisco, owner. Frame and stucco construction of a new telephone exchange building. GENERAL CONTRACTOR: Singleton Company, P. O. Box 271, Eureka.

SHOP BLDG, Pueblo High School, Tucson, Arizona, Pima County Board of Supervisors, Tucson, owner. Contract awarded for the construction of a new shop building at $85,884. ARCHITECT: Place & Place, 9 N. Grosetta Ave., Tucson. GENERAL CONTRACTOR: Craven-Hague Construction Co., 3613 N. Campbell Ave., Tucson.

PURITY MARKET, Burlingame, San Mateo county. Purity Stores, Ltd., San Francisco, owner. One-story reinforced concrete, structural steel roof trusses, wood roof, concrete floors, plate glass front;

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15,000 sq. ft. area. STRUCTURAL ENGINEER: H. M. Engle, 1537B-4th St., San Rafael. GENERAL CONTRACTOR: Younger Bros., Inc., 25 California St., San Francisco.

PRIMARY SCHOOL #1, Bellflower, Los Angeles county. Bellflower City School District, Bellflower, owner. 1-Story frame and stucco building; 15-classrooms, kindergarten, administration bldg, covered passages, composition roofing, concrete floors, asphalt tile covering, acoustical, electrical, painting, plastering, plumbing, heating and ventilating — $353,788. ARCHITECT: Kistner, Wright & Wright, 1125 W. 6th St., Los Angeles. GENERAL CONTRACTOR: Fergot Construction Co., 8228 E. Gardendale, Paramount.

FISH HATCHERY & BROOD STOCK PONDS, Mt. Shasta City, Shasta county. State of California, Division of Architecture, Sacramento, owner. Work comprises series of earthen and concrete ponds, necessary appurtenant structures and piping; wood frame, metal covered, miscellaneous grading and road work, surfacing, electrical and mechanical work—$48,000. GENERAL CONTRACTOR: Bingham Construction Co., 6329 Eastern Ave., Sacramento.

OFFICE BLDG, Beverly Hills, Los Angeles county. J. D. Wrather and Monte E. Livingston, Beverly Hills, owner. 4-Story and basement, masonry, plaster and stone veneer office building; gravel roof, concrete and plywood floors, air conditioning, elevator, glass sliding doors, automatic fire sprinkler system, steel beams and columns, plumbing, electrical, terrazzo paving and asphalt paving; 24,000 sq. ft. area. ARCHITECT: Ashton & Wilson, Harry Wilson, architect, 10819 Santa Monica Blvd., West Los Angeles. GENERAL CONTRACTOR: Ryan Construction Co., 6108 Venice Blvd., Los Angeles.

CIVIC CENTER EXHIBIT HALL, San Francisco. City and County of San Francisco, owner. Project consists of Exhibit Hall under existing Civic Center Plaza, with tunnel under Grove Street to connect with Civic Auditorium; reinforced concrete, elevators, escalators — $3,711,315. ARCHITECT: Wurster, Bernardi & Emmons, 202 Green St., San Francisco; also Skidmore. Owings, & Merrill, 1 Montgomery St., San Francisco. STRUCTURAL ENGINEER: H. J. Brunnier, Sharon Bldg., San Francisco. MECHANICAL ENGINEER: De Leuw Cather, 79 McAllister St., San Francisco. GENERAL CONTRACTOR: Theo. G. Meyers & Sons, 200 Quint St., San Francisco.

OFFICE & FACTORY, Torrance, Los Angeles County. Sperry Rand Co., Los Angeles, owner. Tilt-up concrete construction of a combined office and factory building—$635,287. ENGINEER: Donald R. Warren, 930 W. Sunset Blvd., Los Angeles. GENERAL CONTRACTOR: Donald F. Shaw, 1901 Blake Ave., Los Angeles.

HOSPITAL ADD'N., County Hospital, Santa Cruz. Board of Supervisors of Santa Cruz County, Santa Cruz, owner. 1-Story, basement. Type I. addition to the tuberculosis hosiptal, 14-beds; reinforced concrete construction — $247,974. ARCHITECT: John I. Easterly, 1310 Lincoln St., Watsonville. GENERAL CONTRACTOR: K. J. McGranahan, 500 Spring St., Santa Cruz.

HOLLY'S COFFEE SHOP, Hawthorne, Los Angeles County. Holly's Coffee Shop, Hawthorne, owner. Composition roofing, concrete floor, painting, plastering, plumbing, electrical, heating, ventilating, acoustical, sheet metal; 4770 sq. ft. area—$80,000. ARCHIETECT: Armet & Davis, 2440 W. 3rd St., Los Angeles. GENERAL CONTRACTOR: E and T Construction Co., 1135 N. La Brea, Inglewood.

HOSPITAL ALTERATION, Valley Hospital, Van Nuys, Los Angeles County. Valley Hospital Corpn., Van Nuys, owner. Addition and alteration of present structure, concrete roof, interior plaster, Type 1 construction, reinforced brick walls, metal roof framing, gypsum roof decking, air conditioning, concrete slab, asphalt tile, metal sash, unit will include cobart room, x-rays, supply, surgery, darkroom, elevator; 5000 sq. ft. area—$140,000. ARCHITECT: Davis & Ferguson, Architects and Engineers, 14423½ Sylvan St., Van Nuys. GENERAL CONTRACTOR: Simpson Construction Co., 14123 Bessemer St., Van Nuys.

WAREHOUSE, Walnut Creek, Contra Costa County. Walnut Creek Warehouse Co., Walnut Creek, owner. 1-Story reinforced concrete tilt-up construction, wood roof trusses, wood roof, steel rolling doors; 100x3000 ft. — $103,903. ARCHITECT: Donald M. Shaw, 1342 Creekside, Walnut Creek. GENERAL CONTRACTOR: Romley Construction Co., 2559 Danville Highway, Walnut Creek.

CHURCH ADD'N., Whittier, Los Angeles County. Granada Heights Friends Church, Whittier, owner. Frame and masonry veneer addition, glued laminated beams, composition roofing, concrete slab, plumbing, electrical, plaster work; 6500 sq. ft. area ARCHITECT: ENGINEER: Francis J. Miller & Associates, 2513 W. Slauson Ave., Los Angeles, and Edward F. Escalle, Engineer, 5140 Crenshaw Blvd., Los Angeles.

INDUSTRIAL BLDG., Tracy, San Joaquin County. State of California, Sacramento, owner. 1-Story steel frame, concrete footing and foundation, concrete slab floor on fill, corrugated metal and concrete block siding, wood roof deck, continuous steel sash, steel doors, concrete loading dock, covered passageways, pipe tunnel, mechanical and electrical work; 17,360 sq. ft. area — $209,200. GENERAL CONTRACTOR: Spears Construction Co., P. O. Box 1124, Modesto.

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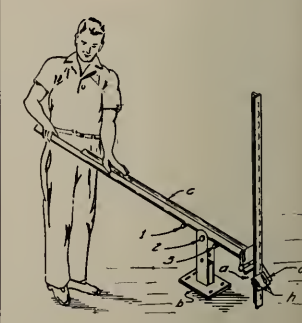

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IN THE NEWS

ARCHITECT SELECTED

The architectural firm of Falk & Booth, 16 Beale Street, San Francisco, has been commissioned by the Belmont Elementary School District Board, Belmont, San Mateo County, to draft plans and specifications for the construction of a new Intermediate School in Belmont.

GEORGE ELLISON WITH HOLMES & NARVER

T. D. "George" Ellison has been named to the position of Controller of Holmes & Narver, Inc., Los Angeles firm of engineers and constructors. He was formerly Comptroller for the Guided Missiles Division of Fairchild Engineer and Airplane Corpn, in New York.

Ellison has had extensive experience in the administration of government contracts both in aviation industry and construction industry, being at one time associated with Holmes & Narver as Controller and Executive Assistant to the General Manager.

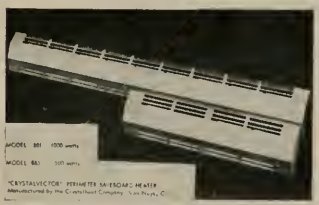
HOME BUILDERS SET 1957 CONVENTION

The National Association of Home Builders has announced its 13th annual Convention and Exposition will be held in Chicago, January 20-24, 1957, according to Leonard L. Frank, chairman of the organization's convention committee.

Among major subjects to be considered are: "Problems of the 1-20 Builder," "Community Facilities," and "Economic Outlook for 1957." A host of leaders from business and government will join leaders of the home building industry in panel discussions, forums, workshop sessions, and dramatized presentations.

ELECTRIC BASEBOARD RADIANT CONVECTOR PERIMETER HEATER

Where cost is a "factor" and comfort a "must", here is the latest in electric baseboard radiant/convector perimeter heating. "Crystalvector."



Made to replace the conventional baseboard with eye appeal. A perfect combination of penetrating radiant and gentle convection heat furnishes a curtain of warm air on your outside walls and windows to counteract down drafts and cold floors. Wafer thin panels require little or no space, permitting full use of every room. Available in modular lengths of 4-ft. rated at 1000 watts (3415 btu's), and 2-ft. rated at 550 watts (1880 btu's) at 220/240 volts. A built-in 115 volt wall receptacle is styled to become a part of the regular baseboard heater, available as an accessory. Floor lamps and other appliances can be

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says SPALDING WATHEN,
President, San Joaquin Valley Builders' Association, Fresno, California

Today, home-builders and buyers alike know the value of complete telephone planning. "Its importance to modern family living is recognized by our Home Builders' Association," says Mr. Wathen. "The model home given away at our recent Spring Home Show has telephone outlets in every room and on the terrace as well."

To successful builders like Mr. Wathen, who are setting living standards in the Pacific West, good telephone planning is a *must*. Pacific Telephone is always ready to help you plan built-in telephone facilities. Just call us and ask for our *free* Architects and Builders Service.

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plugged into these built-in outlets. Complete information from manufacturer—Crystalheat Co., 14761 Keswick St., Van Nuys, California

SWIMMING POOLS SPUR HOME SALES

A survey of home builders in California indivates that a swimming pool added to even one tract home can stimulate interest and sales for the entire project or development.

The survey also indicates that there are a number of excellent types of residential swimming pools available to the builder and home owner, varying in size and purpose from the complete ready-to-assemble Sunplay swimming pool kits that sell as low as $419.15 (including filter, skimmer, etc.) to the elaborate "professional" pool.

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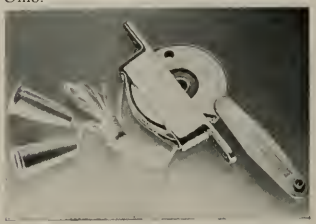
For anyone interested in "Swimming Pools" the new catalog issued by the Sierra Manufacturing Company, 1719 Mt. Diablo Blvd., Walnut Creek, California, makes good reading

NEW JALOUSIE REEL BY ACCURATE DIE CASTING

A new reel type jalousie louver operator designed to work on all makes and sizes of jalousies incorporating only spur gears and no worm gears, is now being manufactured by the Accurate Die Casting Company, 3089 E. 80th St., Cleveland, Ohio.



Reel case and working parts are electroplated, corrosion-resistant, satin-finished zinc die castings. Spur gears are sealed in high temperature lubricants for lifetime lubrication and dust proof operation. Reels designed to mount either left or right; special cord guide hardware for special mountings on either high or deeply recessed windows available.

PRESENTS PLAN TO RE-DESIGN LOS ANGELES

Architect Adrian Wilson, AIA, Los Angeles, recently presented to Mayor Norris Poulson and Arthur J. Will, Chief Administrative Officer of the Los Angeles County Board of Supervisors, a gigantic "crusade" to redesign the Downtown area.

Wilson advocated public support of the proposed City Charter amendment to eliminate height limit restrictions on buildings, and urged that a rapid transit system also be adopted without delay. He declared "it is important that city planners, civic leaders and financial institutions view the problem in its proper perspective." No longer can saving the downtown area be considered as a job of "rehabilitation, of face lifting, or of making the city more beautiful."

Wilson believes that "the city must retool, it must build a new plant that meets and surpases the competition, and it must leave room in its forecasting and planning to make even further drastic changes in the future. Cities must be redesigned, reshaped and reorganized in bold, sweeping steps by civic leaders of vision."

GLASS FILLER WATER COOLER

Large in capacity, small in size, this new glass filler drinking water cooler by HAWS is only 18-in. wide by 24-in. deep, yet has storage capacity for five gallons and recovery rate of 12½ gallons of 50 degree drinking water per hour under standard rating conditions.

Ideal for small cafeterias, restaurants, diners, snack bars, or any location where peak capacities are relatively high, but where space is at a premium. Stainless steel top and glass rack; 36-in. standard counter height, with overall height of 44-in.; cabinet either hammerstone gray, or stainless steel; cooling system hermetically sealed.

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CIVIC AUDITORIUM AND MUSIC CENTER

The Los Angeles county board of supervisors recently approved a new civic development program which calls for the construction of a new 20,000 seat Civic Auditorium and a 4,000 seat Music Center in downtown Los Angeles.

The site of the project is a seven acre area bordered by 8th Street, Hill Street, Flower Street and Olympic Blvd.

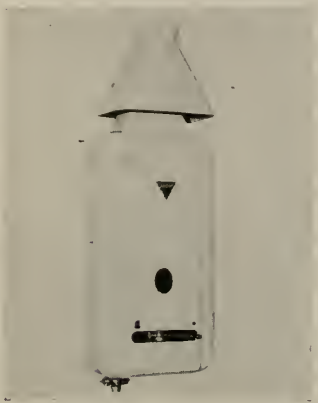
LOW RENT HOUSING

Engineers Ohm & Eckland of Stockton have been commissioned by the Housing Authority of the County of San Joaquin, Stockton, to draft plans and specifications for construction of a 300 unit project near Stockton.

The buildings will be frame and stucco construction with concrete floors and dry wall interiors.

ASCOT GAS AUTOMATIC COIL WATER HEATER

Architects and builders looking for a source of constant hot water should look at this new gas automatic coil water heater.



Only 43" high and 14" wide, out-put 120 gallons hot water per hour; operates economically from natural, manufactured, or liquified petroleum gas. Particularly suitable for homes in out-of-the-way places, and will operate wherever there is a pressure water system. Excellent engineering insures efficient, quiet operation; finished in easy-to-clean porcelain enamel with heavy chrome trim; built-in safety features; very compact, available two sizes, AGA approved. Complete data from Southern Heater Co., Inc., 844 Baronne St., New Orleans, La.

OFFICE BUILDING

The architectural firm of Stiles and Robert Clements, Architects and Engineers, 210 W. 7th Street, Los Angeles, are completing plans for construction of a 5-story and basement office building at Wilshire Blvd. and Reeves Drive in Beverly Hills for the Southland Federal Savings and Loan Association of Beverly Hills.

The building will measure 103 x 85 ft. in area and construction will be of fireproof steel framing, glass exterior walls,

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SWIMMING POOL

The engineering firm of Brooks & Miller, 2138 E. Huntington Drive in Duarte, have been commissioned by the City of Oxnard and the Oxnard School District to prepare plans and specifications for construction of a municipal swimming pool to be located at the high school grounds in Oxnard.

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ARCHITECT JOHN BOLLES DESIGNS STOCKTON STORE

Yost Brothers, Stockton, will build a new store in that City to house their men's wear and women's sport shops, with completion date set for early in February 1957.

The architectural firm of John S. Bolles, San Francisco, will design the 12,700 sq. ft. building which will contain a mezzanine.

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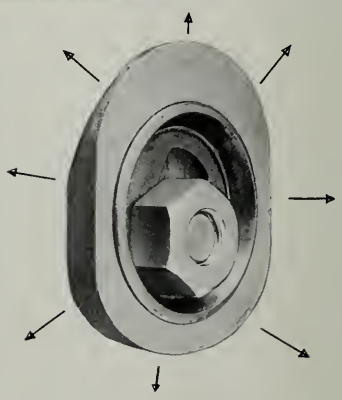

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

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. EDITORIAL NOTES .

A MENTALITY WITHOUT INITIATIVE

What's happening to the businessmen of enterprise and vision in the planned "Utopia" of Sweden's welfare state?

There's a clear answer in a statement by Olle Enghvist, formerly Sweden's leading contractor, that appears in a new book entitled, Sweden: The Welfare State."

Engkvist declares, "I feel that my task is ended. Certainly there are still many tempting projects, but under present conditions with all the existing rules and regulations, I cannot carry out the work I had planned.

"The spirit of the age, which no longer tolerates free enterprise is crushing initiative.

"The 'New Deal' in Sweden represents a mentality without initiative and therefore without pleasure in work.

"The individual is supposed merely to wait his share of the work and no longer has the opportunity to enjoy the thrill that springs from bold ideas and objectives.

"Those who, like myself, had vision must now reconcile themselves to a procedural mentality."

America was founded and has been built on a philosophy of individualism and free enterprise; just how long the greatness of our nation will last is pretty much dependent upon how much our political leaders "go" for the "Utopian" theories.

* * *

WITHOUT FEDERAL AID

With the new School Year well along in its first few month of operation, many parents have become aware of the classroom and teacher shortage with something of a shock. When Junior, or Sis, has to start kindergarten or the first grade in a rented church basement, is one of 45 youngsters in a single class, or waits their turn to use available facilities, parents seem to understand the meaning of words which too frequently go unheeded.

What may not be so clear to school-age children's parents, however, is the fact that many areas are catching-up with the "facility" and "personnel" problem, and by means of their own resources.

The U.S. Office of Education estimates that 67,000 new classrooms will be built this year, a new all-time peak. In 1948 there were 16,000 new classrooms; 50,000 in 1953, 55,000 in 1954, and 60,000 in 1955.

In spite of this great increase there remains a substantial gap between means and needs—about 50% on the new facilities goes towards meeting an accumulated need, and the remaining is available for increased enrollments.

Truly there is a big job left to be done, but experience has proven that individual states and local communities will do what needs to be done to meet this problem with the same courage, enterprise and determination that has led America forward since the days of the Revolution.

Tradition decrees that each community shall decide for itself how its children shall be educated. To transfer a part of this responsibility to the federal government by accepting school-fund handouts, and thereby transfer local school control to Washington, D. C., would be a far worse blow to education progress than crowded classrooms and teacher shortages.

The next time you think in terms of a government hand-out, just remember, funds available represent money collected from you in terms of taxes—less expensive government overhead and waste.

* * *

According to government sources, 36 million homes need some type of improvement or repair.

* * *

A DECENT HOME

The Congress of the United States, in repeated legislative acts and always under strong bi-partisan support, has developed certain broad policies affecting the production of American housing. These same laws have clearly and thoughtfully stated certain basic responsibilities which the federal government has undertaken to make certain that under a partnership arrangement with private industry the housing needs of all Americans will be given primary attention.

Recent events indicate these objectives have become obscured. The nation is now living in an economy in which the Congressional goal of "a decent home and a suitable living environment for every American family," is being ignored. Today, housing has suffered seriously as a result of the policies of our money managers whose concern is limited to the niceties of economic formulae and the cold-blooded equation of money supply and money demand.

Joseph B. Haverstick, president of the National Association of Home Builders, believes that "the time has come, in fact has passed, for the home building industry to state in the most vigorous terms at its command that the Government must reaffirm its fundamental belief in the objectives of our Federal Housing legislation.

Of course all of this interest stems from the critical shortage of mortgage money, which, if continued over any length of time will result in vast home shortages and probably result in promotion of extensive federal housing projects to the detriment of the private construction industry.

SAN FRANCISCO MUSEUM OF ART

The San Francisco Museum of Art, War Memorial Building, Civic Center, under the direction of Dr. Grace L. McCann Morley, has scheduled the following special exhibitions and events for November:

EXHIBITIONS: "Landscape No. 2—1956" an Oil by Emiko Nakano, and prize in Painting awarded by the San Francisco Women Artists. Other prizes awarded the same group include, "Decision", Oil by Ann Blackemore; "Cemetery at San Andreas, Oil by Gloria Corbett; "Warrier", sculpture by Bella Feldman; Group of 6 Photography prints by Barbara Cannon; and "Hills of Saint Cere", drypoint by Beth Van Hoesen.

"Art from France" will be continued; Paintings and Drawings by Zainul Abedin of Pakistan; and the 20th Annual Drawing and Print Exhibition of The San Francisco Art Association.

SPECIAL EVENTS: Gallery tours, Library, Rental Gallery, Bookshop, and Adventures in Drawing and Painting each Friday evening, 7:30; Art for the Lay-

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M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park San Francisco

Detail

"THE DUCHESS OF CROY AND HER YOUNG SON"

ANTHONY VAN DYCK
(Flemish, 1599-1641)

Collection
Roscoe and Margaret Oakes

man, and the Children's Saturday morning Art Classes.

The Museum is open daily.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is offering the following special exhibits and events for November.

EXHIBITS: The Gladys Lloyd Robinson and Edward G. Robinson Collection. This world famous collection, under the auspices of Patrons of Art and Music, includes celebrated works by the masters of Impressionism and Post Impressionism, being presented for the first time in its entirety in San Francisco. Paintings by Martyl; Paintings by Ernie Palomino; Paintings by Enrico D'Assia; and Drawings and Watercolors by Charles Gassion.

ACHENBACH FOUNDATION FOR GRAPHIC ARTS: On exhibit at the Museum—Prints Pertaining to the World of Music, and on loan at the San Francisco Public Library—Religious Prints from Martin Schoengauer to Sister Mary Corita, I.H.M.

SPECIAL EVENTS: Organ Program each Saturday and Sunday afternoon at 3 o'clock. Painting classes for children, ages 6 to 14, each Saturday morning at 10 o'clock.

The Museum is open daily.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, is presenting, during November, an exhibition of Paintings by Michael Czaja, John Gill and Antonio Sotomayor.

A group of Watercolors by William Ross Cameron will be shown in the "Little Gallery."

M. H. deYOUNG MEMORIAL MUSEUM

The M. H. deYoung Memorial Museum, Golden Gate Park, San Francisco, under the direction of Walter Heil, announces a pre-holiday showing of special exhibits and events for November.

EXHIBITIONS: Thirteen Watercolorists, representing the 21st Annual; Oils, Watercolors, Pastels and Graphic Art of the Society of Western Artists—This is the 17th Annual Exhibition of the group; and selections from Permanent Collections.

EVENTS: Classes in Art Enjoyment for adults include Exercises in Oil Painting, the Painting Workshop for Amateurs, and Seminars in the History of Art. For the Children, classes have been arranged in Picture Making, Art and Natura, and the children's Art Club. No Classes will be held Thanksgiving Day, November 22.

The Museum is open daily—10 a.m. to 5 p.m.

PAKISTAN ARTIST EXHIBIT AT SAN FRANCISCO

An exhibition of paintings featuring the work of Zainul Abedin, an artist from Pakistan, is currently being shown at the San Francisco Museum of Art.

Zainul Abedin was born in Mymensingh, where his father was a police officer. His family, who wished him to study for the government service, resisted his expressed desire to become a painter, so he ran away from home at the age of sixteen and went to Calcutta. There followed a period of great hardship, which must have contributed much to Zainul Abedin's great sympathy with the common people of his country.

He first became well known for his famine sketches made in Bengal in 1943.

Zainul Abedin was admitted to the School of Fine Arts in Calcutta and took his degree in 1938. After some years as a teacher, he was appointed to the Ministry of Information in Karachi and was later made principal of Dacca Institute of Arts.

He has travelled extensively in Europe and his work has been exhibited twice in London, once under the auspices of Imperial Institute and the second time it was sponsored by the Royal Society of India, Pakistan and Ceylon.

Zainul Abedin is at present visiting in San Francisco on a world tour to study museums, art schools and universities financed by a Rockefeller Grant. He has spent two months in Japan, and after three months in the United States, will visit European countries.

NATIONAL GALLERY OF ART WASHINGTON D. C.

An architectural exhibition in the National Gallery of Art, Washington, D.C.; preparation of three books about the history and social impact of American architecture of the past century; competition among architects in the design of a special postage stamp, and other activities are being planned for the American Institute of Architects Centennial next year, Leon Chatelain, Jr., AIA president announced recently.

REPORTS FROM THE

CALIFORNIA COUNCIL of ARCHITECTS

YOSEMITE CONVENTION

OCTOBER 10-13, 1956

Excerpts from an Address by Edmund R. Purves, Executive Director, The American Institute of Architects to the Regional Conference.

. . . At a time when the architects of the United States have seemingly reached a peak of prosperity never before enjoyed, in fact are staggering under an abundance of work scarcely anticipated, it might be well for us to make a reconnaissance. Let us consider where we are. Let us try to look ahead.

"In all the reports and rumors that come our way, from all the data we can assemble, there is little or no indication of an easing up. Work still flows triumphantly over drafting boards of the Nation.

"The cry goes up for 'more draftsmen,' skilled assistants are in short supply, and clients find themselves on waiting lists. The profession sees no darkening of the golden days. Many of us remember the days of '29 when the prospect too was glittering. Today, if chastened by our ordeal of the thirties, we are strengthened by experience gained in depression, in war and in recession; we have learned discretion; the Government has established safeguards in our interest and against our recklessness. The memory of trial and tribulation is so fresh that we are not too likely to dash ahead blindly into the dark forest of disaster. We shall keep our fences mended and lay aside against a rainy day.

". . . Determinations are not made by political parties; trends are not guided by individual people; our futures will be shaped by the great intangible forces that are fashioned by people themselves, that take their origin in such basic matters as income, as inflation, as buying power, as demands, as surplus, as shortage.

. . . The Congress of the United States actually represents the people. An Administration, once in power, studies the people and seeks guidance from observation. The Administration engages teams to study, to analyze and to recommend. It is in effect somewhat like a weather bureau. It is also capable of drawing wrong conclusions and voicing predictions which turn out to be erroneous.

"All of this is of extreme interest to The American Institute of Architects. You would be interested to know that we have our hand in the picture; that we play our part in the shaping of policy. We are consulted, a tribute that commenced only within recent years—it started awhile back during the Korean crisis when we made a survey of the work on the boards of the offices around the country.

"There were rumors on all sides of an imminent recession. The construction industry actually believed it was in a doleful way, that it was about to go under, and that work was falling off. At a meeting of the representatives of the construction industry, when we were gathered gloomily around the table, they turned

(See page 12)

THE ARCHITECT as ARTIST

Keynote address of the Convention by Dr. Stephen C. Pepper, Head, Department of Philosophy, University of California, Berkeley.

First of all, I should like to consider for a few minutes what a work of architecture is. Every structure, of course, is not a work of architecture. Many of them are just practical instruments with no aesthetic appeal. They are not even ugly. They are just aesthetically negligible. They may become ugly, however, if they are in a context of environment where they are called upon to be beautiful. But within a town or a city which has an overall beauty, they may be inoffensibly incorporated as a sort of texture surrounding buildings of positive beauty. A work of architecture properly speaking is a work of art.

What is a building as a work of art? It is not simply the physical materials as these would be described by a physicist or chemist. Perhaps I could best bring this out by reference to another kind of work of art easier to describe in aesthetic terms than a building—namely a picture.

A picture as a work of art is not primarily its canvas and pigments. The properties of a canvas and pigments are basically those which a physicist or chemist would ascribe to these materials. These properties as customarily named by the physical scientists do not have color or line or texture as these are seen by the eye for aesthetic appreciation. The physical canvas

and pigments stored in a closet emit no color or perceptual shape or texture, no contrasts of surface, no spatial composition, and clearly no representation of objects of nature if the picture happens to be a landscape or a portrait. For these characters of a picture to emerge, the picture must be seen by a human eye. The physico-chemical picture must be brought out into the light where it can reflect light from its pigmented surface, so that the diverse rays of light can stimulate the eye and stir up a response in a human mind. In short, the picture that is appreciated for its colors, and lines, and masses in composition, and for its representative meanings as a landscape or a portrait must be a mental perception.

The object of appreciation when we look at a picture is clearly not the physical canvas and chemical pigments, but the mentally perceived composition of color, lines, and meaningful representations and the like. It is a perception.

But this is not all. One momentary mental perception of a picture is not enough for grasping the complete picture as a thing of beauty. To get the full appreciation of a picture one must pass his eye over the picture and change the focus and center of attention from one detail to another—note the balance across the surface of one feature by another, the contrast of one form by another, the tensions of shape with shape, the texture and quality of colored surface, and the gradations of colors and shapes, the repetitions and variations of motives, and also the skill of the brushwork, and if there is representation of men or of nature, the skill of draftsmanship, and the placing of the figures, and perhaps their dramatic effect, and the catching of the mood of the scene, or the character of the sitter. All these details that belong to the fully appreciated picture take time to appreciate and many successive perceptions to grasp in the mind.

What I am bringing to your attention here is that the fully appreciated work of art is an assemblage, a synthesis, a funding of many single perceptions. One momentary perception cannot grasp it all. Certainly one first glance at a complex work of art cannot take it all in at the single glance.

Now, what has come out of this brief analysis is that a work of art is not a single object, but a nest of three closely interrelated objects. There is, first, the physical object that controls the stimuli for perception. There is, second, the perceptions stimulated at any one time by the physical object. And there is, third, the synthesis, the gathering together, of the successive momentary perceptions into the total aesthetic object, which is the fully appreciated picture. It is convenient to have separate terms for these three objects that are involved in a work of art. The first may be called the **control object,** since this is the object that controls the stimuli for the perceptions. The second may be called the **perceptual object,** and the third, the **object of criticism,** for this is the ultimate aesthetic object which we critically evaluate for aesthetic worth or beauty.

In a work of architecture, the control object is the structure of physical materials ordinarily built up on a site by a contractor under the supervision of the architect who had made the plans. The perceptual object is any single momentary perception by a person who visits the finished physical structure and is stimulated by some visual aspect of it. Since a physical building is a three-dimensional object with an inside and an outside, there is no difficulty here in realizing that no single glance at the building is adequate for a full appreciation and critical comprehension of it as a total object of aesthetic worth. This total aesthetic object is clearly the result of many perceptual responses to the building from many aspects within and without together with the mental consideration of how these many visual aspects function together with one another in relation to the purpose for which the building was built.

What is headed for as total aesthetic object in a building as a work of art is this final gathering together of all the perceptions a discriminating spectator can have of this building in its setting. This is a very complex thing. No one can be more aware of this complexity of this thing than you here who have had many occasions to plan and supervise the construction of such buildings.

The physical building is simply the control object for the final aesthetic object which is something perceived and comprehended by a human mind. If there were no human minds to respond to the physical building there would be no final aesthetic object—no object of criticism—but simply some sticks and stones whirled round the sun like any other loose sticks and stones scattered over the surface of our globe. The ultimate aesthetic object—the thing of beauty—is a human thing, a thing of the human mind and for the human mind, but it is a thing of great value in the lives of men.

My reason for dwelling on this ultimate aesthetic object—this object of architectural criticism—is that it can be so easily lost sight of in the complexity of an architect's problem in making a building for a client who often does not fully know what he wants and yet must be satisfied. In relation to the central subject of these meetings here today—that of what we all should keep in mind towards surrounding ourselves in California with a congenial and (we hope) a beautiful architectural environment in the face of a great population influx that is predicted for the decades just ahead and the tremendous building boom this influx will stimulate—in relation to this question, it is not the bare physical object with which we are concerned, nor is it the simple perception of a passing stranger, but it is this total thing of beauty which we are to be living with year in year out.

To maintain and enhance the beauty of our exceptional natural environment, we shall have to keep constantly in mind that the buildings and the cities to be built are not mere constructions of sticks and stones, nor, to allude to another well-known phrase, "machines for living", but are organizations of human perceptions and meanings. These organizations must be rich and satisfying. A beautiful building is like a person and has a character. A person's character is preserved in his physical body. But the physical body is not the person. A man's personality is an organization of human dispositions which we come to perceive and appreciate in terms of acts and intentions and emotional warmth—all of them mentally apprehended just as with the building taken in as an aesthetic object of appreciation. What we all have to keep in mind in building up our coming California environment is the ultimate aim that our buildings and our cities have character.

With this aim in mind, let us consider a few things that we shall have to guard against, and then some things we may positively seek to attain.

Among the many things to be guarded against, a number of them can be gathered under two heads—the menace of the hard-headed man, and the menace of the imitative man. These two menaces are serious, for most men of power and wealth in our society turn out to be one or the other of these two menaces, or at least to have menacing tendencies in these directions.

The hard-headed man is the excessively practical man whose life has been devoted to money-making or to politics or to engineering or some other absorbing but narrow calling. Almost in proportion to his success in his calling he is a source of danger to the future comfort and beauty of our state. The very terms "comfort", beauty", art", "aesthetic" and the like are repulsive to his nature. Propose anything on the grounds of its beauty or aesthetic appeal and he is at once against it as a waste of money, as a thing impractical and effeminate, and possibly suspect of being un-American. Two contemporary instances of the action of typical hardheaded men are the roller-coaster bridge across San Francisco Bay from Richmond to San Rafael. This one can see, just to look at it, was the construction of some very hard-headed men. Even if something less ungainly would have cost more in money, it should have been undertaken in view of the cost to men's eyes and feelings that structure will incur for generations to come. And San Francisco Bay is one of the great objects of natural beauty in the world. Seeing this Richmond-San Rafael Bridge, I marvel how we are so fortunate as to have inherited such pleasing structures as the Bay Bridge and the Golden Gate Bridge. Whatever accounted for that difference, can we possibly take this lesson to heart and avoid repetitions over our landscape of such things as the Richmond-San Rafael Bridge.

The other instance is what is now going on about the plaza in front of the Ferry Building in San Francisco. Here too we perceive the action of a hard-headed man being suggested evidently by admirers of hard-headed men, by which a beautiful feature enhancing one of the really beautiful cities in America is threatened with mutilation by a straight and uncompromising elevated highway planned for cheapness only and without any consideration for the character and charm of the city.

These are the sort of things that hard-headed men in positions of power and authority are likely to ram through without seeking the advice of aesthetically informed architects or of other competent men, indeed rejecting such advice when professed and flaunting it.

One of the great problems in dealing with this situation, is the excessive admiration so many Americans have for this type of narrow, uncompromising hard-headedness. We are a practical people, and this is a great virtue in the wide sphere where practicality is appropriate. But when practicality is carried to the excess of mutilating our cities and countryside, it is no longer humanly practical. How can we get this simple truth across to our hard-headed compatriots who are so unknowingly threatening the peace and comfort of our future?

A second menace, I said, in the imitative man. He is likely to be a man of considerable cultivation, but aesthetically timid and unhappy in a highly experimental and exuberant architectural era. He wants the architecture of the present and the future to resemble the architecture of the past. In a static period, his influence would not be noticed and would, on the whole, be beneficial. But in a developmental period, he is a drag. This is the sort of man who has demanded conformity to his tastes in many of our largest building programs. He is the man whose taste has controlled the designs of many of our bank and office buildings, many state and federal buildings, including the building of schools, universities, and post offices.

The way it works is this: the architect is chosen who is believed to be amenable. Besides, an architect is always under obligation to consider the desires of his client. The architect if given leeway could have designed a building of distinction. But he knows the limitations of his client's tastes and restrains his imagination. He comes out with something that is a compromise between his architectural ideals and the conservatism of his client. The resulting building is dull and uninspired. And such are often the buildings in prominent places. They set the character of a town into something that is itself dull and uninspiring. Remember the rivalry of the cathedral towns in the twelfth and thirteenth centuries to excel one another in the excellence and imaginativeness of their central public structures. In too many of our towns the aim appears to be only to put up buildings exactly imitating the buildings in the next town or county. So, town after town as you drive through them has no more

THE ARCHITECT . . .

character than a row of tenpins all turned off of the same machine. This might not be so bad if the original tenpin design were itself imaginative — though still monotony has never been an aesthetic virtue. But I do not need to remind you of the architectural dullness of the model itself for so many of our town and city structures—especially today.

For today we are in an era of architectural awakening the like of which has not occurred for a number of centuries. We have become architecturally aware of the potentialities of a great variety of new materials, and of modes of construction congenial to these materials. This is an age of steel and concrete when previously in our culture stone masonry construction dominated conceptions of architectural design.

The first realization of this change emerged in the period of rampant functionalism. The achievement of this extreme movement was to clear away old traditional **beaux arts** preconceptions and open minds to the vast architectural potentialities of new materials and modes of construction and design. This first shock attack upon deeply entrenched traditional conceptions has achieved its objective. What remains is to consolidate the new territory that has been won and realize its full potentialities. The present is one of the great developmental eras in architecture. Never has the creative imagination of the architect had greater scope for original and outstanding achievement. And here in California not only is the architect fortunate in the era in which he is born, but, we learn, there is to be an enormous influx of population, capital, and social need requiring a huge amount of building.

But we must earnestly try to find some way of overcoming the drag of the initiative man on the creative freedom of the architect who will be called upon to do the planning for this upsurge of building. The disposition of the funds for this period of building are likely to be very largely in the hands of either hard-headed or imitative men or both. Unless many of these men can be persuaded of the social damage they may be doing, we shall have much to apprehend in the decades ahead.

And at this point let me add, that if among architects themselves as a professional group there happen to be some who are not appreciative of the present creative potentialities of their art—some even who may themselves be classified among hard-headed or imitative men—then here is a special task of education close at home to be coped with.

Having pointed out certain dangers to be guarded against, I should now like to turn to some positive suggestions for the decades of building expansion ahead.

First, and perhaps most important of these is that

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to me as a representative of the architects and asked if I thought I could find out anything. I said I thought the architectural profession was the most sensitive barometer of the construction industry and that we would set up that barometer and take a reading. So we ran a little postcard survey.

"The postcard survey indicated that far from being in a bad way the construction industry was in a very healthy condition and could look forward to at least another half year, if not longer, of full engagement. . . . Subsequent events bore out that our little survey was correct. It attracted attention too, which was more gratifying. The Council of Economic Advisers to the President of the United States became interested and encouraged us to continue; the Federal Reserve Board was interested; the construction industry was interested; and from that moment on, when The American Institute of Architects reports on conditions in the construction industry, it is listened to with respect.

"Now I have used the term "construction industry" rather freely, and I suppose you have too; we all do. But we are not quite sure just exactly what the industry is, even those of us who are in it; and even those of us who work continuously with its various elements.

"Dollarwise, construction of all kinds—light and heavy—accounts for more in the American economy than any other activity—even agriculture. But there is a school of thought, which I understand is led by ex-President Hoover, which claims that the construction industry is not an industry at all—it is simply a service.

. . . "In this welter in which we struggle to exist, where is The American Institute of Architects? We are right there in the middle. We are not in an unhappy position chiefly because of the individual members of the profession who have, through their industry, ability and intelligence, brought about a position of eminence and power—obtained with the counsel and assistance of The Octagon. And yet one can hardly say that we at The Octagon like to think we sit up there and direct your destinies. We like to help out, but as for direction, that again is an unwelcome word. It is a cooperative effort, each playing our part.

"We have achieved an enviable position in the American structure; we are looked to, we are respected and we will maintain our position as long as we exercise common sense. We will practice our leadership as long as we have the right to practice it and as long as

we are careful to avoid a proclamation of our superiority.

"There is no gainsaying the fact that The American Institute of Architects has been helped by others in the industry and we owe a great deal of thanks to such organizations as the United States Chamber of Commerce, one of the first to recognize the true position of the architect and to encourage us. So, throughout the land it is well for the architects of the country to interest themselves in local chambers of commerce; in those gatherings of men made up of the guiding interests of the community. We have been helped, too, by our friends, The Associated General Contractors of America, who never have failed to support us in any issue in which our interests were not contrary to their policies.

. . . "The American Institute of Architects still has a long, long way to go. We have not yet achieved the position which the Royal Institute of British Architects enjoys in England. This is, in some measure, due to the constitutional differences between England and the United States. Nor do we enjoy the power and integration with the profession and the political economy that the provincial associations and the Royal Architectural Institute of Canada enjoy.

. . . "I spoke a little bit about dangers, and I would like to deal with another danger which is more present. I refer to the delusive confidence we like to have that one can buy goodwill over the counter; that all one has to do is hire the man in the grey flannel suit at a fancy fee and then sit back and greet the customers. There is virtually no possible way for you to enhance your position through the hiring of a purveyor. The acquisition of goodwill and respect is our and your personal obligation. . . . Let us just go on and work and plan, get clients, do a job and, above all, let us take care that our hard gained efforts are not lost.

"I am very conscious of the dangers to the profession, some of which I have mentioned; but the greatest present threat to the profession lies in our blindness to an insidious encroachment, an encroachment which we actually encourage by our complacency. I am not referring to the well known encroachments by governmental bureaus, which are easy to see—I am referring to those non-architectural people who are entering the planning field and who, if we are not careful, will reduce the great architectural profession to a technical service—a technical service to do the drafting for the real planning forces.

"Being acutely aware of what is taking place, some of us in The Institute urged the organization or the setting up of a committee. It was to be known as the Committee on the Advancement of the Profession. The reason for bringing this Committee into being was perfectly simple—it was just to find the answers to two questions: (1) Is the architectural profession engaged in all the fields of design of which it is capable—is it meeting its obligations in those fields completely? (2) Is The American Institute of Architects, as its national organization, doing the job it should be doing in seeking the answer to the first question?

"The Committee, however, embarked immediately upon a series of philosophical discussions on the origins of architecture and maybe even on the origins of man. It got itself up in the stratosphere. . . . Our problem is more earthy. The answer will not have been found in the realm of philosophy; the foe will not be found on the heights. The answer lies in hard work and the recognition of ourselves and in the understanding of our economy.

"We are concerned with simple mundane matters. We are concerned with the daily lives of the people and the sheltering of the people. This means planning in its broadest and most minute sense.

"Scholarly pursuits are a lot of fun; but we must face reality.

. . . "You in this region have unique opportunities to point the architectural way, favored as you are by natural beauty, by climate, and by vitality. As we look at you from the East we think you are shaking off the shackles of inhibition and you can advance, you can pioneer.

"You have made architectural history with your schools, your houses and your way of life. I doubt if

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PUBLIC RELATIONS SEMINAR

Excerpts from a Seminar Address by Dr. Dwight Bentel of San Jose State College on the subject, "PUBLIC RELATIONS."

". . . My God, what's an architect? And what in heaven's name is a convention of architects?

"Well, being a typical academician, I consulted the dictionary. And here's what I found: An architect is a contriver, a designer, a maker . . . well, let's see . . . and I looked along until I found contriver . . . 'one who contrives, as a schemer, a plotter, an intriguer.'

"Well! When I learned I was to speak to a convention of contrivers, schemers and intriguers, right away I felt better about the whole business. Felt right at home.

"I'm not afraid to talk to you contrivers, schemers, plotters and intriguers . . . I'm one of you. So let's just remember we're buddy-buddies . . .

"Gentlemen . . . the problem before this group is public relations. Public relations for architects. Let's get to it. And I should like to begin by quoting from a very famous . . . speech, if you will . . . the Sermon on the Mount. It will set the theme for what I want to say to you:

"And Jesus went about all Galilee teaching . . . and

there followed him great multitudes of people . . .

And seeing the multitudes, he went up unto a mountain: and when he was set, his disciples came unto him:

And he opened his mouth and taught them, saying . . .

A city that is set on a hill cannot be hid

Neither do men light a candle, and put it under a bushel, but on a candlestick; and it giveth light unto all that are in the house

Let your light so shine before men, that they may see your good works . . ."

"This is the finest concise statement of public relations principles that has ever been made.

"The profession of architecture, it seems to me, has traditionally, consistently and now presently, ignored these principles. And you have a very real and very great public relations problem.

". . . No profession has hid its light under a bushel as has architecture. Yours probably has the poorest public relations of any profession except one . . .

"As laymen, a non-architect—yes, a casual observer—it seems to me your problem divides into two major parts:

"First, you must overcome a backlog of unfortunate public relations that your predecessors for many generations have established—that you have inherited.

"Second, you must create, embark upon a positive public relations effort. One calculated to establish architecture in the position of importance in the public mind it deserves.

". . . Let me say here, ladies and gentlemen, that there is no such thing as 'no' public relations. You have 'em. A city set on a hill cannot be hid. You, of all people, have public relations—whether you like it or not. At this time they are poor. The average citizen has only the vaguest notion of the nature of your work, or your contributions. He isn't aware of what modern architecture is striving for—and toward. If he builds, he is obsessed from the start with the idea, 'Save architects fees.' . . .

"For many complex reasons, including your own indifference to the problem, the large volume of home building is still being accomplished with little or no architectural assistance. . . .

"Architecture, I understand, is at a sort of crossroads. Within your field, debate rages over the question of "where do we go now?" For help in answering this problem you need the help of the American public itself.

"You are in a public relations vacuum.

"What is public relations? We'd better have a definition. It's not 'press agentry,' as so many of you think. Don't confuse public relations with publicity. Publicity is merely something flattering said or printed about a business or profession—while public relations is a long-range pattern of behavior, for good or bad, that is identified with a given business or profession by the public. Publicity is only one of many public relations media.

"You don't just 'adopt' public relations. You have got them, whether you realize it or not. They are something you can't avoid. It is important, then, that you understand that you have public relations all the time—and that you cannot succeed as a profession beyond a certain point unless you are willing to do something about them. The fact that you haven't done much is costing you dollars and dollars and dollars—and it's hampering your professional progress.

"We are confused when we use the term 'public relations' as synonymous with publicity, propaganda, press agentry, and even advertising. Public relations must not be brushed off as just a nice-Nelly expression for ballyhoo.

"We are living in a democracy. It is the responsibility in a democracy, of any institution, any profession, to maintain two-way communication with the public which it serves, and which is dependent upon it for some public good. Public relations, then, is the communication and interpretation of information and ideas from an institution TO its publics, and the communication of information, ideas, opinions FROM those publics to the institution, in a sincere effort to establish a mutuality of interest and thus achieve the harmonious adjustment of an institution (a profession if you will) to its society.

"There are always two interests to be served in any public relationship: the private interest, and the public interest. Often these interests collide. Who, then, defines public interest? The practical answer is that where amity prevails, where communication is established, where understanding exists, there is a give-and-take compromise that results in a definition of **mutual interests.**

". . . And of course to educate the public differently, you've got to do differently . . . the first step in any organized, successful public relations program is this: Put your own house in order. That involves a number of things. Careful self-analysis of your opportunities and responsibilities. A research program to determine wherein lie the areas, which are the developments, what are the trends that offer greatest opportunities for service.

"California is playing host to the greatest human migration in human history. Four million persons entered this state since 1945. Another four to five or six million will enter the state in the next decade, doubling the state's population. Four million persons is more than the total populations of 36 states of the union. This population is increasing at the rate of 50,000 a month—over half a million each year.

"The birth rate in California is soaring. From 110,000 in 1940 to 250,000 in 1950, and the curve goes almost straight up. 13,600 new school children every month.

"New business and industry pouring into the state.

"All this adding up to an unprecedented demand for building. In 1955 California's construction industry exceeded 5 billion dollars—nearly 12 per cent of the nation's total. The national outlook is for some 400 to 405 billion dollars of construction in 1956, of which California again will get the lion's share.

"Personal incomes in California are expected this year to be somewhere between 4½ and 5 per cent above 1955 levels—one of the greatest prosperities in the history of the world.

"What does all this mean? It means building — public, industrial, commercial, residential—on a fantastic scale. The state's public institutional building program alone, for the next five years, totals 448 million dollars. At my own college, 29 million dollars of building during this five-year period is contemplated . . . 61 million dollars for new schools in Santa Clara County alone in the next five years.

"When before, in all history, have architects been confronted with such opportunity. For making money? No, that's not what I mean. I mean, for exercising the influence of their profession on the aesthetic, the cultural face of the state. For making this a better place for people to live in.

". . . Is this great opportunity for the professional architect to produce only an era of crackerbox living? And block-house public monuments?

"Sure—this is the period of mass production—of standardization. The era in which the rugged individualistic American disappears into a faceless mass of citizenry . . . Why is fine architecture valued so low? Because the public has not been educated to want something better. You folks—the profession of architecture, caught up in the day to day pressures of the planning board and the construction details have ignored your public relations. Your responsibility for educating the people.

"If this becomes the era of Maginot-line public buildings and rubber stamp-designed homes, then you people have failed in a major responsibility. It is your job—your responsibility in our democracy—to help educate the public to appreciation of the aesthetically fine and good. So far as I can see, as a layman, you have made no such effort.

"Don't you suppose that the profession of architecture might be avoiding its responsibility in not opposing the standardized home, the concrete block house public building, the great and growing emphasis on the austere functional, in favor of something else . . .

"Don't you suppose that the profession of architecture has a responsibility, through a well-planned and energetically conducted program of public relations, to engender in the American public a spirit of love and appreciation for beauty, distinctiveness, individuality in perhaps the most conspicuous of all art forms—architecture?

"We can't afford the beautiful, the living, the lasting? Certainly not, if the public doesn't want it enough to pay for it. If it has no love and appreciation for it.

"And . . . if the public is educated, taken into partnership, brought up to it, it can afford—and will afford, an architectural rennaissance that will dwarf any that has ever gone before.

"Men do not light a candle, and put it under a bushel, but on a candlestick; and it giveth light unto all that are in the house . . .

"Let your light shine before men, that they may see your good works!"

THE ARCHITECT

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the architectural profession notice the unusually great social responsibility it has for the future character of the cities and countryside of this State. The very personality of California for 1960 and 1970, and on for a century or more is to be molded largely by their hands —by the hands of the present generation of California architects in cooperation with the city and regional planners.

One reason for my taking this time at the beginning to show what it is that an architect does in planning a building which is a work of art, was to show that a building or a city as a thing of beauty is a being with a character, a sort of personality with which we may be friends. But if our city has an ugly personality, it will be a constant source of irritation and even disgust and hostility. It is the major responsibility of architects to give us towns and cities with character of which we can be proud, and with which we can be friendly. You must not let us who are your clients down. As a profession, you have a social responsibility equal to that of doctors or teachers. You are responsible for the beauty of our environment, as doctors are for its health, and educators for its intellectual integrity. To be aware of the seriousness of this responsibility is essential to its being successfully met.

Other positive suggestions are all in the way of means for carrying out this central responsibility.

One such suggestion is to see to it that there are an adequate number of architectural schools from which to recruit your profession and that they are adequately staffed. As a profession your influence in this area is strong even if usually indirect. It is on the advice of architects known to be competent that administrative officers fill positions in architectural schools. The standing of a school is always essentially its standing in the judgment of the profession. It is important that this judgment be honest, aesthetically sound, and readily available. But where a new school is needed, the profession could actively move to get it into being.

Then also there is great need to educate the public in the character of good architecture, and in the awareness that a building is not an isolated entity but is part of an environment in a neighborhood of other build-

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STRUCTURAL ENGINEERS

ASSOCIATION OF CALIFORNIA

The Silver Anniversary convention of the Structural Engineers Association of California was held Oct. 11-13 in, of all places, Reno, Nev. The location was really appropriate, however, since Nevada is known as the Silver State, and justified by the largest attendance of any SEAOC convention ever held, over 500 being in attendance, and official registration exceeding 300.

Structural Engineers Association of Central California was the host chapter, with J. S. Barrish as general chairman. The technical program committee was headed by L. H. Hollister, and the social program by R. H. Cooley. Acclaim for these committees was widespread, as the convention was thought by all in attendance to have been both a technical and a social success.

Election of Officers

HENRY M. LAYNE
President, SEAC

At the closing banquet, the officers for 1957 were announced. President will be Henry M. Layne, consulting structural engineer of Los Angeles; vice president will be Howard A. Schirmer, Bethlehem Pacific Coast Steel Corp., Alameda; and secretary-treasurer will be Harold L. Manley, Los Angeles Department of Building & Safety. Other new directors are William T. Wheeler, consulting engineer, Los Angeles; Walter L. Dickey, Bechtel Corp., San Francisco; Clarence E. Rinne, Hall-Pregnoff & Matheu, Palo Alto, and Arthur A. Sauer, consulting engineer, Sacramento.

Engineering manpower

Special guests included J. Lyerla, president of the Structural Engineers Association of Washington; F. Honey, president of a similar group in Oregon; and representatives of the profession from Arizona and Idaho.

C. M. "Tex" Herd, retiring president of the association, was in charge of the entire gathering, but presidents of the component associations presided at the several technical sessions. At the first, on Thursday afternoon, Walter A. Buehler, president of the Central California group, was in the chair. At this session, Dean Morrough P. O'Brien, head of the engineering department at University of California, Berkeley, spoke on "The Future of Engineering Manpower."

The dean quoted from Kipling's "Sons of Martha" and from Herbert Hoover, to emphasize the pleasures and tribulations of engineering. Kipling wrote, speaking of the sons of Martha, who were condemned to work while the sons of Mary worshipped:

"To these from birth is belief forbidden;
from these till death is relief afar.
They are concerned with matters hidden—
under the earth-line their altars are;
The secret fountains to follow up, waters withdrawn
to restore to the mouth,
And gather the floods as in a cup,
and pour them again at a city's drouth.
They do not preach their their God will
rouse them a little before the nuts work loose.
They do not teach that His pity allows them
to leave their jobs when they damn-well choose.
As in the thronged and the lighted ways,
so in the dark and the desert they stand,
Wary and watchful all their days that their
brethren's days may be long in the land."

Hoover said: "As a profession engineering has both joys and sorrows.

"The engineer has the fascination of watching a figment of his imagination emerge with the aid of science to a plan on paper. Then it moves to realization in cement, metal or energy. Then it brings new jobs and homes to men. Then it adds to the security and comfort of these homes. That is the engineer's high privilege among professions.

"The profession, however, does have woes. His work is out in the open where all men can see it. If he makes a mistake, he cannot, like the lawyers, blame it on the judge or jury. He cannot, like the politician, claim his constituents demanded it. Nor can he, like the public official, change the name of it and hope the voters will forget. Unlike the clergyman, he cannot blame it on the devil.

"Worse still, if his works do not work, he is damned. That is the phantasmagoria which haunts his nights and dogs his days. He goes to bed, wondering where the bugs are which will inevitably appear

to jolt its performance. He awakens at night in a cold sweat and puts something on paper that looks silly in the morning.

"And the world mostly forgets the name of the engineer who did it. The credit goes to some fellow who used other people's money to pay for it. But the engineer, himself, looks back at the unending stream of goodness that flows from his successes with a satisfaction that few other professions can know."

Levels of civil engineering

Dean O'Brien pointed out the four levels of civil engineering: 1. Discernment of the problem and conception of radically new structures, requiring ingenuity, imagination and resourcefulness; 2. Mathematical analysis and solution of the problem; 3. Routing handbook design; 4. Construction.

He pointed out that men are increasingly available as this list is descended, and the search for and training of men for each of the levels and particularly the upper ones, is of great importance. He suggested that parallel levels of education be made available to prospects in each category, so that the gifted student capable of the highest level of design need not feel bored or inhibited, or that those of lesser attainment yet with definite possibilities of contribution to the field of engineering feel that they cannot keep up with the pace of the instruction. He recommends that training in mathematics for those with a bent toward engineering should begin in the 10th grade.

Leon C. Bibber, chief research engineer-welding, United States Steel Corp., followed with a discussion of a new quenched and tempered construction alloy steel known as T-1. Bibber explained that military engineers are somewhat familiar with it in the welding of armor plate. T-1 is low carbon steel with less than 1 per cent magnesium and nickel, with high weldability and toughness which minimizes residual stress.

William T. Wheeler, President SEAOSC, presided at Friday morning's technical session, when Professor Nathan Newmark, of University of Illinois, presented a valuable paper on "Design for Blast Protection." It is condensed at the close of this report.

Curtain wall construction

W. G. Kirkland of the American Iron & Steel Institute spoke on the "Future Use of Curtain Wall Construction." Kirkland explained that "curtain wall" in his discussion would mean any non-bearing exterior wall whose major purpose was in addition to enclosure, fire resistive characteristics. He pointed out that common practice was masonry walls of from 2 to 4 hours fire resistive construction and gave a spectacular example — the Empire State Building — with non-bearing walls which add a total weight of over 30,000 tons to the loads the bearing structure must carry. The light weight of metal curtain walls makes possible the reduction in size and cost of spandrel beams, wall columns and foundations. Other features are speed of erection, increase in rental space, positive weatherproofness and insulation. Kirkland further commented that exterior code regulations were being revised in the light of new findings in the field of metal curtain wall construction.

John Kozak, California Division of Highways Bridge Department, explained the "Future Use of Electronic Computing Machines as Applied to Structural Problems." Kozak described, with the aid of slides, the various types of electronic computers available and gave their costs or rental fees. He explained that their use relieved the engineer of hours and sometimes weeks of mathematical computing by doing them in a matter of minutes or, at most, hours. A new class of technicians not requiring engineering training man the machines, thus relieving the engineer for design work.

Precast thin shell concrete

W. L. Dickey, President of SEAONC, presided at the Friday afternoon technical session. Professor Willar A. Oberdick, University of Michigan, spoke on the "Future Use of Precast Thin Shell Construction." The professor stated that imaginative use of thin shell concrete for small and medium span structures depends upon thoroughly conceived and efficiently executed precasting techniques. Prof. Oberdick quoted Mario Salvadori on costs. "The greatest obstacle to expansion of reinforced concrete shell construction is the high cost of building forms" and went on to say that "any means that can be used to reduce these framework costs will result in making thin shell concrete more feasible." Prof. Oberdick pointed out that: "Repetitive shapes permitting the use of traveling forms or the multiple use of forms will result in substantial savings. In addition to the savings in direct formwork costs, precasting of thin shell concrete has other advantages. Slopes greater than 45 degrees can be poured in an advantageous position. Designers can use more complex shapes without any increase in formwork costs. Greater quality and precision are possible.

"Construction time can be reduced. Poured in place thin shell concrete has in general been limited to the use of simple forms in large structures or to buildings in which the traveling form has been used to an advantage. For structures such as the Alabama Livestock Coliseum, with a 360-ft. span poured in place, concrete is competitive with structural steel. Precast thin shell concrete roofs should be competitive with other structural forms for short or medium spans. In Mexico City poured in place "umbrella shells" covering a floor area of 40x60 ft. are competitive with a light steel joist system. Although the labor material cost ratio is different than in the United States, precasting should make the shells feasible here.

"There are four major methods that may be used in precasting thin shell concrete. The 'small element' method consists of small precast pieces assembled

with poured in place joints or ribs. The principal advantage of this method as related to costs appears to be the saving of forming lumber. The second method is that of precasting 'large structural sections.' Several sections along with poured joints or edge members form complete structural units. The third method consists of precasting and handling of 'complete structural units.' Ribs or edge members are cast with the shell. This method is limited to smaller size structures because of handling difficulties, except in cases where the lift slab technique is used. The fourth method is that of 'precast panel forms.' Lightweight insulating concrete or similar insulating material may be cast in complex shapes for initial use as forms over which the shell and ribs would be poured in place. The precast panel would serve as an insulating and sound absorbing medium. The first and fourth methods are adapted to factory production, the second and third to site precasting."

The professor gave numerous case histories of structures in Mexico where thin shell concrete construction was used to great effect. It seems Mexico is far ahead of the United States in its use. He cited progress made in research in precast thin shell concrete roof construction at the College of Architecture and Design at the University of Michigan and concluded that not all thin shell concrete can be successfully precast and that more study is required for precast than for poured in place construction.

Sandwich construction

Alan D. Freas, Forest Products Laboratory, U. S. Department of Agriculture, gave a paper on "Plastic Laminates and Sandwich Construction As Applied to Building Construction." Mr. Freas commented that "at first thought, the idea of a building in which the primary structure is based on glass, aluminum foil, or wrapping paper may present something of a startling concept to the structural engineer. And well it might, for it is hard to conceive that glass filaments on the order of 0.00020 to 0.00040 inch in diameter or 2 or 2 mil aluminum foil could play a significant structural role." Mr. Freas went on to say that such materials are now being used structurally, although in a limited field. Glass reinforced laminates with tensile strengths above 100,000 psi per sq. in. and moduli of more than 5,000,000 psi have been produced. Mr. Freas explained that "structural sandwich construction consists essentially of a layered construction formed by bonding two thin facings to a thick core. The thin facings are usually of a strong, dense material, since they are the principal load-carrying parts of the construction. The core, which is of a weaker, lightweight material, separates and stabilizes the thin facings and carries shearing loads. The entire assembly provides a structural element of high strength and stiffness for its weight. Sandwich construction is also economical, since only small amounts of the relatively expensive facing materials are used and the core materials are usually inexpensive. The materials are positioned so that each is used to its best advantage.

"Specific nonstructural advantages, such as thermal resistance, fire resistance, and decay resistance, can be incorporated by proper choice of the core. Among the lightweight materials that can be used as cores are balsa wood, rubber or plastic foams, and formed thin sheets of metal, cloth, or paper, usually in the form of a honeycomb or similar shape."

Mr. Freas pointed out the present use of reinforced plastic panels, plain and corrugated for awnings, canopies and for skylighting roofs. He predicted that glass fibered reinforced sections of channel, angle or I-form may be used in the future. Mr. Freas believes that sandwich construction will find its greatest potential in lightweight structural panels; that the material used in the insulation or fire resistive requirements.

Ben C. Gerwick, Jr. of Ben C. Gerwick Co., told of precast concrete procedures that permit competing favorably with steel and other structural materials. compared with rectangular structures having plane

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BLAST DESIGN

By PROF. N. M. NEWMARK
University of Illinois

In the past few years, the concept of blast resistant design has undergone nearly as much of a change as that which corresponded to the advent of the atomic bomb immediately after the war. With the large size thermonuclear weapons which are available or foreseeable now, the blast overpressure level for which it is necessary to provide protection has increased, and the duration of the blast pressure pulse has become so long that in many respects the blass pressures act with at least as much effectiveness as a static load of the same magnitude. For example, a 10 psi. overpressure level can be reached at distances of the order of more than 6 miles, and a 20 psi. level at 4 to 5 miles, while the durations are as much as 5 seconds.

This is not the whole story, however. Structures with vertical or only slightly inclined walls sustain a reflected pressure which may be much more than twice the overpressure—for 10 psi. the reflected pressure is 25 psi., for 20 psi., it is 60 psi., and for 100 psi. the reflected pressure is 500 psi. Because of this fact, and because of the necessity for providing radiation protection, it is becoming increasingly attractive to go underground, even if only to attain the advantage of a better streamlining against the blast forces. It also becomes desirable to consider the advantages of arches and domes, or of structures with curved surfaces, as

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THE VICTORY BUILDING

Lima, Peru

PERU'S NEW ARCHITECTURE

By CLARENCE CULLIMORE, Architect

Fellow, American Institute of Architects

Some of us north of Mexico are apt to pass off, with a shoulder shrug, references to South American architecture. How ignorant can we be? To a traveler, it comes as a pleasant shock to find that the Inca ruins at Cuzco, and the Spanish Colonial mansions of Arequipa, interesting as they are as historical relics, do not impede young Peruvian architects from creating new structures in a contemporary mode. In fact, a modern flare is sweeping the skyline of Lima.

In this Capital City the nation's only full-fledged school of architecture is housed in a recently constructed group of buildings, beautiful in their simplicity. It is significent that these buildings for Peru's School of Architecture were financed by popular subscription, the campaign being led by enthusiastic alumni who had graduated in architecture when the school was a part of the National School of Engineering. Professors and students as well as practising archi-

AIRPORT of LIMATAMBO

Lima, Peru

TORR-TAGLE PALACE
is a splendid example of architecture of Lima's past life.

tects of Lima, having a deep pride in establishing their National School of Architecture, got behind the building project and pushed it to success.

Peru's School of Architecture, now on its own campus, is manned by its own faculty. Dean Fernando Belaunde Terry, a personable young man of about forty-five years, heads it. He is also a practicing architect of enviable reputation. A former student of Miami University in the United States, he was graduated in architecture from the University of Texas. Dean Terry is politically minded, having missed by a small margin being elected the President of Peru at the last general election.

The architectural faculty consists of men of talent and energy, well qualified to instruct the 200 embryo architects, of whom ten per cent are women. The school teaches a five-year course. Perhaps the man-hours required in some courses exceeds those in our schools. It appears, too, that these Peruvians are placing especial emphasis on research in the use of local materials of construction and in laboratory experimentation with new materials. Peruvian students and architects are less circumscribed by building codes than we in the United States.

Although their lack of restriction leads towards originality in design and fosters the creative flare, it also places upon the architectural instructors an added responsibility in directing genius into channels of common sense and safety.

Peru is confident that this school's output of young men and women architects will cause fresh and vibrant structures to spring up all over the nation. They look forward to new hospitals, new schools, public buildings and commercial structures that will follow the contemporary patterns already set by Lima's airport, the Panagra Building, the Atlas Building, the Min-

CASA VALLECITO
Arequipa, Peru

A modern apartment house with Mount Misti, which is nearly 20,000 feet high, in the distance.

COLEGIO MILITAR—FRANCISCO BOLOGNESI, new military school at Arequipa, where young Peruvian men are trained in arts and sciences as well as military matters. Candidates for entrance are selected according to mental and physical fitness. Statue of military hero Francisco Bolognesi in foreground.

istry of Haciendas, the Ministry of Education and impressive slum-clearance projects. Dean Terry's sights are high on architectural ideals. He and his faculty aim to place architectural graduates in positions from which they may direct the development of architecture in Lima and throughout Peru. This is no easy target. Although the nation has, for centuries, been a leader in architecture—Pre-Incaic, Incan and Spanish Colonial—examples of which cling to the landscape as historic relics, these traditional buildings do not hinder the efforts of vigorous youth consecrated to new ideas in a modern creative mode.

It would seem that Peru, today, as in its past, will remain in the fore-rank of architectural advance in South America. Her excellent National School of Architecture is doing much towards this end.

Wing of new administration building on campus of Military School. Vicuna in foreground is the school mascot.

HIGH
ON A
HILL

ODD FELLOWS MEMORIAL PARK

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RALPH LARSEN & SON, General Contractor

GRAHAM & HAYES
Consulting Structural Engineers

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CHAPEL
INTERIOR

A new building of unusual character, housing a mausoleum, columbarium, crematory, chapel and offices, was recently put into service at Memorial Park in Santa Rosa, for the Odd Fellows Cemetery Association of Santa Rosa, as a nucleus for future expansion.

The building is of modern design in brick and concrete, yet has the quality of repose and reverence so necessary in this type of structure.

The crypt section of the building is of conventional reinforced concrete, and the architects determined the remainder of the structure should be done in grouted brick masonry. This proved to be much more economical that building in concrete with the necessary finishes.

One of the new features was the construction of crypts, facing a garden on the outside of the building, an arrangement that has proven so successful that the Association is now building more of them.

Another feature was the installation of radiant heating in the mausoleum section. This not only affords a comfortable heat at all times, but also reduces the maintenance on the marble. The Chapel has a complete separate forced air ventilating system.

Travertine marble was used on all the crypts, both inside and outside. The mausoleum columns in the section are in Rosara marble, and this same beautiful marble was used in the lobby, setting a very rich tone for the entire building.

Exterior walls are finished with concrete and brick, while the reinforced concrete floors are finished in Magnesite Terrazzo Field with Marble border. Exterior doors are glass panel and interior doors are in slab hardwood.

Cost of the building is exceptionally reasonable being only $24.90 per square foot. The mausoleum section contains 281 crypts, and the cost per crypt was $177.00, another unusually low figure.

Photos by Phil Fein

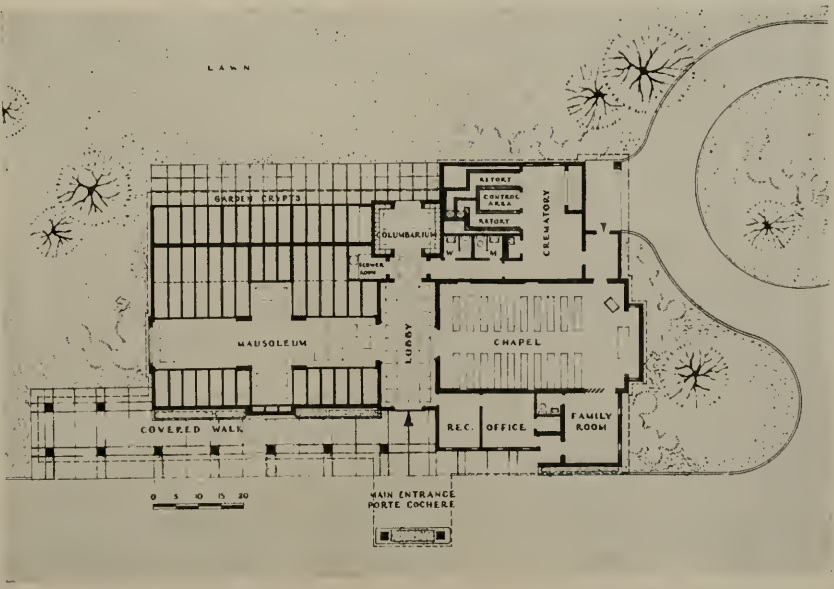

PHOTO No. 1

UNITED GROCERS' WAREHOUSE

RICHMOND, CALIFORNIA

Pre-fabricated wood roof trusses play a dominant role in this mammoth grocers' warehouse in Richmond, California, spanning over six acres of building area. Broad and virtually unobstructed storage areas are provided by these trusses, developed by the Easybow Engineering and Research Company.

To cover 270,000 sq. ft., some 270 trusses are utilized. The entire roof structure, consisting of roof trusses, purlins and plywood roof diaphram, was furnished and erected in one integrated contract, thereby providing strength and safety for both vertical and lateral loads, with cost reducing speed. The integral system employed permits the entire roof structure to be completed within a few days after the last wall column is poured, regardless of the size of the job.

PHOTO No. 2

PHOTOGRAPHS shown on this and opposite page were taken on the same day and show all phases of roof construction of this huge warehouse are under way simultaneously, thereby reducing construction time and cutting costs. Photo No. 1 shows the trusses being built and raised; Photos Nos. 2 and 3 show how installation of purlins, plywood, and roof can follow closely the truss erection, thereby completing all phases at nearly the same time.

(Photographs courtesy Taylor Roof Structures)

PHOTO No. 3

PORTLAND CEMENT ASS'N. EXPANDS FIELD OFFICES

The Portland Cement Association has announced expansion of its field services to cement users by opening of a new regional office in Los Angeles, under the supervision of John M. McNerney, which will supervise the Los Angeles and Seattle, Washington, District Offices.

Purpose of the expansion is to make the services of experienced highway, structural and conservation engineers and experts in the use of concrete for farm and home construction available on a more localized basis.

McNerney, with the Association since 1941, has been serving as statewide paving engineer for the Los Angeles office, and previously was with the Missouri State Highway Department, Department of Geology and Soils.

The Association's research, technical service and educational work are supported by the voluntary contribution of firms in the U.S. and Canada who produce Portland cement, but has no connection with the manufacture, distribution or marketing of cement.

KERN COUNTY BUILDERS STUDY LA HOUSING

A large group of Kern county building representatives were recent visitors to the Los Angeles area where they viewed developments and studied merchandising and promotional techniques used by the Los Angeles building industry.

The visitors were guests of the Building Contractors Association of California and the Southern California Gas Company.

Highlight of the one-day tour was a visit to the Tournament of Homes, a display of nine houses built by members of the Pasadena-San Marino chapter of the BCA located in La Canada.

Among those making the trip were: William Paynter, architect, Robert H. Eddy Associates, Bakersfield; Harry Leydenfrost, architect, Alford & Thomas, Bakersfield, and Ernest L. McCoy, architect, Bakersfield.

ARCHITECT SELECTED

The architectural firm of Anderson & Brown, 5335 College Avenue, Oakland, and architect Irwin M. Johnson, 449 W. MacArthur Blvd., Oakland, have been commissioned by the Oakland Unified School District, to draft plans and specifications for construction of the new Highland Elementary School which is to be built in the City of Oakland.

ADDITION TO JAIL REDWOOD CITY

Architect Michael Goodman, 2161 Shattuck Ave., Berkeley, is completing plans for construction of a 11,000 sq. ft. reinforced concrete and structural steel jail addition to the Hall of Justice in Redwood City.

The addition will be in the form of a penthouse jail and will cost an estimated $250,000.

HERRICK IRON WORKS EXPANDING PLANT

Engineer J. D. Naillon, Oakland, has completed drawings for construction of a 1-story, 130,000 sq. ft. steel fabricating plant for the Herrick Iron Works, Oakland.

The new mill building will be of reinforced concrete and structural steel construction and will cost an estimated $1,000,000.

ARCHITECTS AND ENGINEERS CONSOLIDATE LA OFFICES

Consolidation of five Los Angeles area offices of Daniel, Mann, Johnson & Mendenhall, architectural and engineering firm, into one location has been announced by Phillip J. Daniel, partner.

The move brings the firm's home office and domestic operations divisions under one roof. Two floors in the new Tishman Building, 3325 Wilshire Blvd., some 25,000 sq. ft. of floor area, have been taken over and will provide facilities for the firm's 300 employees. In addition the firm has leased two lots within one block of the new offices where employee and customer parking is provided.

Branch offices of the firm are located in Washington, D.C., London, Tokyo, Guam, Bangkok and Lucknow, India.

BUILDERS ATTEND NAHB BOSTON MEETING

Among West Coast builders attending the recent fall meeting of the Board of Directors of the National Association of Home Builders in Boston, Mass., was R. Reese Myers, president of the Home Builders Institute of Los Angeles, K. Sande Scnness, George M. Pardee, Jr., Col. William H. Evans, Ben C. Deane, Ray K. Cherry and George O. Prussell, all of Los Angeles.

New designs for 1957 homes and the development of community facilities for new developments were discussed at the meeting.

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BLAST DESIGN

(From page 16)

walls and roofs.

The significance of even as small a pressure as 10 psi. is best realized by comparing this force, which is equivalent to 1440 lb. per sq. ft., with the common design forces for wind of only 20 to 30 lb. per sq. ft.

As with other structural problems, the future of blast resistant design requires study of relatively new and unfamiliar design conditions, and may involve for a successful solution the use of new materials, new forms of construction, and new concepts of strength and stiffness. Training in dynamics has been relatively weak in the past for structural engineers. In the future, the engineer will have to understand dynamical problems as well as statistical problems. He will have to use new and more complicated methods of analysis. In many of these problems he will find it necessary to make use of high-speed digital computers, not only for research to find methods that are efficient and accurate, but also to carry out the details of his design work.

Computing machines are available now with fantastic speeds of operation, in many problems approaching better than 1000 times the speed of the desk calculators commonly used in engineering offices. The University of Illinois digital computer, the ILLIAC, has been used in dynamical studies of behavior of frames and other building structures subjected to blast loading, and deflecting into the plastic range or approaching failure. Such problems are extremely complicated and involve too much difficulty to solve successfully by other means. As a measure of the speed of the ILLIAC, it can solve 39 simultaneous linear algebraic equations in 39 unknowns, and print out the answers to 10 decimal digits, in two and one-half minutes. It has solved as many as 96 equations in 96 unknown, but this takes longer—45 minutes are required. Most of this time, incidentally, is merely printing time, not computing time. Somewhat slower and less versatile machines are commonly available now commercially, and digital computers exist in design stages which may be more than 100 times faster than the best now available.

In the use of these machines lies part of the answer to our desperate need for technically trained personnel. When the machines do the detailed calculations, then the engineer will be free to establish the design concepts and to use his judgment and intelligence more freely to solve the difficult problems of the future—even those relating to atomic blast effects.

Silver Anniversary
STRUCTURAL ENGINEERS

(From page 16)

Gerwick explained the improvements that now permit shipments of precast concrete members considerable distances competitively. He cited the construction of a precast-prestressing plant at a bridge site in Louisiana which resulted in reducing the project cost by several million dollars.

It was announced that the 1957 SEA convention would be held at Coronado, Calif., on Oct. 31, Nov. 1 and 2.

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CALIFORNIA COUNCIL OF ARCHITECTS

The 1956 Convention, recently held in Yosemite, was the most successful in the Council's history with more than 800 persons in attendance..

Limiting business sessions to two board of directors meetings, an innovation by William Corlett, chairman, and Donald Hardison, George Hasslein and Walter Stromquist of the Convention Advisory Committee, proved successful and popular with delegates. (See a more detailed report of conference discussions elsewhere in this issue.)

Resolutions included request for public information on Governor Knight's "Plan of Reorganization of the Department of Professional and Vocational Standards"; approved revised schedule of compensation fees; tentatively approved Products Literature Guide; and announced plans for the 1957 annual convention to be held in Coronado, San Diego, October 2-6 would go forward immediately.

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WASHINGTON STATE CHAPTER

Garrett Eckbo, Landscape Architect, Los Angeles, was the principal speaker at the November meeting in the Tennis Club, Seattle, taking as his subject "Landscape Design Today," and "The Joint Responsibilities in the Field of Landscape Architecture."

NORTHERN CALIFORNIA CHAPTER

Under the leadership of Chapter officials, representatives of the associations of the design professions in the Bay Area met twice in October to consider the formation of a "united front" committee.

Groups interested in the movement includes the East Bay, Coast Valleys and Northern California Chapters of the AIA; the American Society of Civil Engineers; Bay County's Consulting Engineers and Land Surveyors; Structural Engineers Association of California; California Association of Landscape Architects; and the Northern California Chapter of the American Institute of Planners.

Objectives of the Committee shall be: "To act in the public interest on matters relating to the future physical development of the Bay Area; to make independent studies on such matters; and to cooperate with other organizations, and individuals, in the Bay Area,

Directors: David Vhay, Edward S. Parsons, M. DeWitt Grow, John Crider, Lawrence Gulling. Office of President, 131 W. 2nd St., Reno.

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Nevada State Board of Architects:
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Wm. Stephen Allen, President; William Corlett, Vice-President; Worley K. Wong, Secretary; Donald Powers Smith, Treasurer; Robert S. Kitchen, Bernard Sabaroff, Corwin Booth and A. Appleton, Directors. Exec. Secty. May B. Hipshman. Chapter Office, 47 Kearny St., San Francisco.

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ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Albert Beber-Vanzo, Secty; Stanley Howatt, Treasurer. Club offices 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
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Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institute—Los Angeles:
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whose purpose is the logical and orderly development of the Area."

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SAN DIEGO CHAPTER

The Chapter has instituted a monthly Bulletin The San DIAIGAN, which is in charge of John C. Deardorf, assisted by Seymour E. Francis.

Help of the Chapter is being enlisted by the San Diego Historical Foundation to assist in plans to restore the Whaley House in Old San Diego, and to advise on which of several old homes should be salvaged for the development of the area as a historical shrine. The Whaley House was the original Court House for San Diego county.

SOUTHERN CALIFORNIA CHAPTER

Kenneth M. Nishimoto, architect and member of the Pasadena Chapter AIA, who was in charge of a tour to Japan following the 88th National Convention of the AIA held in Los Angeles last May, was the principal speaker and gave an illustrated report of the tour's highlights.

The meeting was held in the Chapman Park Hotel, Los Angeles, and included a new products Exhibit in charge of Howard Van Heuklyn. Stewart Kerr served as Program Chairman.

OREGON CHAPTER

The West Coast Lumbermen's Association recently presented three brief motion pictures on the use of wood, followed by a general discussion on the Associations new "use book."

CENTRAL ARIZONA CHAPTER

"Architecture USA" a motion picture film, documentary of American Architecture, was the feature of the regular November meeting.

A special Building Material seminar, conducted by Jack Jordan, Executive Manager of the Lumber Merchandisers Association, presented a comprehensive program on recommended use and specification of lumber and lumber products for Arizona.

Officers nominated to serve for 1957 included: Martin Ray Young, Jr., President; Robert T. Cox, Vice-President, and David Sholder, Secretary.

(See page 30)

WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

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Structural Engineers Association of Central California

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American Society of Civil Engineers Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Secy-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

AMERICAN SOCIETY OF MILITARY ENGINEERS SF

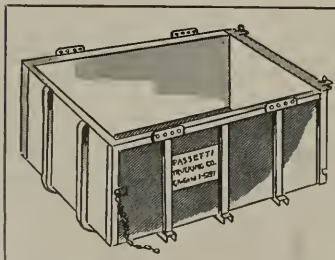
A field trip to the Hamilton Air Force Base in Marin County featured the November meeting of the Society of American Military Engineers—San Francisco Post.

Post members were greeted by Major General Roy H. Lynn, Commander, Western Air Defense Force and briefed on WADF mission and activities, and then taken on a tour of the more interesting construction projects under way, the combat operation center, the control center, and were shown a F89-H jet fighter and its guided missile armament. The group also visited the alert facility and witnessed a practice scramble.

AMERICAN SOCIETY OF CIVIL ENGINEERS—SAN FRANCISCO

The December 18th meeting will feature a panel discussion of Bay Area rapid transit by members of the Section committee appointed to study recent reports on this subject.

George White, chairman, Harmer Davis, Joseph Hunter, Arthur Jenkins, and John Morin will participate in the panel discussion. New Life Members of the Society residing in the Bay Area will be guests of the Section at this meeting and will be presented with "certificates". New Life Members include: Frank E. Bonner, Consulting Engineer; Thomas H. Campbell, retired, Stone and Webster Engineering Corpn.; Robert M. Copeland, retired, Corps of Engineers; Shirley T. Corfield, retired; Walter Dreyer, Vice-president and Chief Engineer Pacific Gas & Electric; Robert R. Fisher, retired; John R. Fox, General Contracting Manager, American Bridge Company; Harry P. Hart, bridge engineer, Southwest Division, Bureau of Public Roads; Herbert J. King, Assistant Chief, Contract Administration Branch, Corps of Engineers; Samuel P. Laverty; Charles M. Romanowitz, Director of Sales, Howitzer Production Dept., Yuba Manufacturing Co.; and Ralph G. Wadsworth, Consulting Engineer.



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STRUCTURAL ENGINEERS ASSOCIATION OF NORTHERN CALIFORNIA

"Carquinez Bridge Foundations", was the subject of a talk at the November meeting in the Engineers Club, San Francisco. Speaking on the subject were L. C. Hollister, Project Engineer, California State Division of Highways, Sacramento; C. H. Darby, Senior Bridge Engineer, California State Division of Highways, Sacramento; and L. L. Snedden, Chief Engineer, Mason & Hanger, Silas Mason Co., Inc., F. S. Rolanli, Jr., Inc. (a Joint Venture) Crocket, site of the new highway construction across the Sacramento-San Joaquin Rivers.

The history and background of the existing highway bridge and construction methods being used on the new parallel bridge foundations were outlined by the speakers.

Recent new members include: Kirk C. McFarland,

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

"Shop Welding Inspection" was the subject of a panel discussion at the November meeting held in the Roger Young Auditorium, Los Angeles, with Steve Barnes, Consulting Structural Engineer serving as

Barbara Counties Branch, Robert L. Ryum, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Associatiton
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

Col. Wm. F. Cassidy, President; Cmdr. W. J. Valentine, 1st Vice-President; Col. Edwin M. Eads, 2nd Vice-President; Bob Cock, Secretary; C. D. Koerner, Treasurer. Directors Col. J. A. Graf, Capt. A. P. Gardiner, P. W. Kohlhaas, C. G. Austin and C. R. Graff.

Moderator. Other members of the Panel were Gil Morris, Superintendent of Building, Los Angeles City Department of Building and Safety; Rube Binder, Chief Engineer, Fabricated Steel Construction, Bethlehem Pacific Coast Steel Corpn., and George Brandow, Partner, Brandow & Johnston, Consulting Structural Engineers, and President of the Los Angeles Section of ASCE.

Slides were used to illustrate some serious deficiencies in shop welding which has been recently noted on several multistory structures; problems and responsibilities of those involved in the design, fabrication and inspection of steel structures, were also discussed.

Recent new members include Charley C. Curtis, Member; Louis R. Hovater, Ernest L. Schroeder, Herbert G. Winkler, and Joseph W. Zelner, Associate; and Per T. Ron, Junior.

APPLICATIONS FOR FELLOWSHIP NOW BEING ACCEPTED BY ASCE

Applications for the J. Waldo Smith Hydraulic Fellowship for 1957-58, which offers a cash stipend of $1,500, payable in October 1957, plus as much more to a total of $2,000 as many be required for physical equipment connected with the research, are now being accepted by the American Society of Civil Engineers, San Francisco Section.

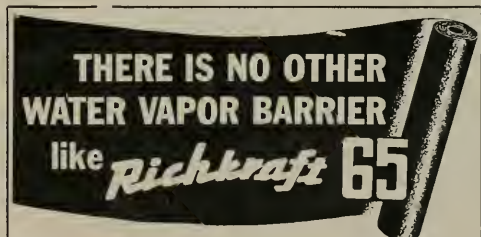
This Fellowship is offered only every three years. Applicants should be less than 30 years old. Complete data from R. M. Kennedy, Secty., 604 Mission St., San Francisco.

AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS SF

A joint meeting of the Sacramento and San Francisco Chapters was held early this month at the Capitol Inn, West Sacramento, with Robert Wilber, Investment Dept. of Reynolds and Co., Sacramento Branch, investment brokers, speaking on the subject "Common Stocks and Common Sense Investing."

Wilber discussed the problems of investing in common stocks, Shareownership of American Business. What shareownership means, Investing methods and terms, and The Monthly investment plan.

Announcement was made by Herb Duncan, Program Chairman, and Charles Lambert, Dance Committee Chairman, that a Christmas Dance will be held Friday night, December 7th in the Empire Room of the Sir Francis Drake Hotel, San Francisco.



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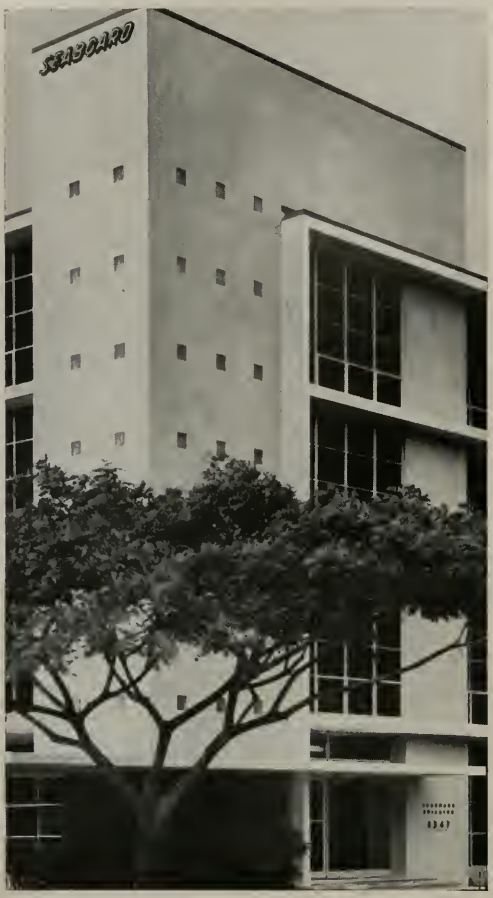

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A.I.A. ACTIVITIES

(From page 27)

WAL-LOS ANGELES

"The Meaning of Art" was the subject of a talk by Marion Hewlett Pike, at the regular meeting, November 7, held in the Pasadena Art Museum.

Marion Pike is one of California's foremost artists.

Announcement was also made that the Annual Dinner Dance of the WAL will be held December 1, in the Riviera Country Club, Pacific Palisades, with Mrs. Ray Johnson, 9024 Firebird Ave., Whittier.

WAL-SAN FRANCISCO

Vernon De Mars spoke at the November meeting, held in the Elks Club, San Francisco, on the subject "The Ferry Building."

Wives of newly certificated architects were entertained recently at the home of Mrs. John Bolles with May Hipshmann speaking on the subject of Developing an Aesthetic Sense in our young people today by teaching understanding and appreciation of the fine arts—music, art and architecture—in our schools. Among the newly certificated architects' wives entertained were: Mesdames E. Allen Steinau, Jr., Peter Ingalls, William Foard, Gunnar Anderson, Dirk Van Erp, Kenneth Elvin, John Hogg, Robert Thorsen, Clyde Cohen, Charles McCormick, Robert Malerbi, Walter Frederick, Yow Lee, and Bernard Bloch.

CALIFORNIA COUNCIL OF ARCHITECTS

(From page 11)

the fact is overlooked by you that many of our honor awards, many of our prizes, go to you. That so many of the winning entries are marked "California" is not a matter of fortune, for luck plays no part in the winning of prizes. These honors are earned by you for excellence as is also the esteem of your fellow practitioners. Your designs win because they deserve to win. So help us to turn some of the energy that has gone into the winning of architectural preeminence to establishing the position of the architect in his rightful place in the American scene.

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CONSTRUCTION SPECIFICATIONS INSTITUTE ELECTS OFFICERS

The San Francisco Area Chapter of the Construction Specifications Institute, elected the following officers to serve during the ensuing year:

Henry McLain, President, Bechtel Corp'n; Henry Collins, AIA, Vice-President; George E. Conley, Secretary, Alta Roofing Co.; Albert Barnes, Treasurer, Gladding McBean & Company. Members of the Board of Directors include: Emery T. Hirschman, AIA, John T. Kruse, AIA, and Alternate, Bourne Hayne, AIA.

STUDENT LUNCH BOOK STORE

Architects Smith, Powell & Morgridge, 208 W. 8th Street, Los Angeles, are preparing plans for construction of a 1-story, Type 3, student lunch and book store at the El Camino Junior College, Los Angeles county, for the El Camino Junior College District. The unit will contain approximately 10,000 sq. ft. area.

ENGINEER IN NEW AND LARGER OFFICE

The firm of LeRoy Crandall & Associates, Consulting Foundation Engineers, have moved into new and larger offices at 1619 Beverly Blvd., Los Angeles, according to a recent announcement.

ELECTED MEMBERSHIP INDUSTRIAL DESIGNERS

Paul Laszlo, Beverly Hills designer, has been elected a member of the American Society of Industrial Designers.

Laszlo, a native of Hungary and now an American citizen, is recognized for his custom-designed interiors for homes, hotels and department stores. In 1934 he was awarded the Distinguished Achievement Citation by the California Fashion Creators.

SANTA CRUZ CITY HALL ADDITION

Architects Francis A. Lockwood and Kermit L. Darrow, Mission and Center Streets, Santa Cruz, are completing drawings for construction of a 1-story block and frame addition to the Santa Cruz City Hall.

The new facilities will provide quarters for the Police Department.

NEW SEARS, ROEBUCK BUILDING PLANNED

Sears, Roebuck Company of Los Angeles has acquired a site at Masonic Avenue and Geary Streets, San Francisco, and will construct a $100,000 addition to the company's store.

The architect is John S. Bolles, Pier 5, Embarcadero; Structural Engineer, Nathan Karp, 223 Clara Street; and Mechanical Engineer, H. W. Eagleson, 400 Montgomery Street, San Francisco.

MOTEL AND RESTAURANT

The architectural firm of Sabaroff & Dow, 1179 Market Street, San Francisco, is working on drawings for the construction of a 257-unit Motel to be built on Albany Hill near Taft Avenue in Albany, for the American Motor Hotels, Inc.

The project will include a restaurant, cocktail lounge and dance floor.

MOTEL BUILDING

Architect Frank O. Merwin, 716 Montgomery Street, San Francisco, is completing drawings for construction of a 2-story, frame and stucco, Motel Building on Highway 101 just north of the City of Ukiah.

The project will include 42-units, a dining room, cocktail lounge, swimming pool and parking area.

BILL F. JONES WINS NATIONAL AWARD

Bill F. Jones, Smoot-Holman Co., Inglewood, California, was recently presented a silver-cup as a national award for designing the "Most Interesting Lighting Job" of 1956. The first prize award was in conjunction with the 50th Annual Technical Conference of the Illuminating Engineering Society held in Boston, Mass.

Jones' entry was a lighting design planned for the Los Angeles engineering office of the Air Research Company, and was chosen in competition with entries from all parts of the U.S. and Canada. He is Research Engineer with the Smoot-Holman Company.

EDWIN M. BENNETT NAMED CHIEF OF ENGINEERING

The appointment of Edwin M. Bennett as Chief of Engineering of Richard George Wheeler & Associates, Architects and Engineers of San Diego, has been announced by Mr. Wheeler.

Bennett was Associate Civil Engineer in charge of the Plan Checking Section of the Building Inspection Department of the City of San Diego for the past two and one-half years. Prior to that he was Structural Design Engineer for an international firm specializing in oil refineries and large industrial and commercial structures.

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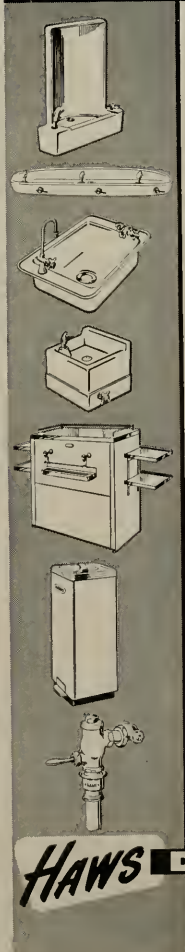

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THE ARCHITECT

(From page 13)

ings and on a site with a natural setting. Something is accomplished in universities and colleges towards informing our future public about these aesthetic principles. Such is my personal responsibility as a teacher, and I trust that I and my colleagues have some effect. But in the bulk, we teachers cannot reach many of this total community, even though it is persons out of a picked group that we do reach. The architectural profession could help by supporting the need of instruction in the arts in higher education, because it is something rather new and still open to suspicion by many in the academic field. There is a strong tendency among scientific specialists and administration to try to make all art instruction scientific, in a pedantic way —to demand M.A.'s and Ph.D.'s and verbal research papers, of all art instructors (including architects). For some art instruction these degrees are appropriate, but not for all. So, there is need of watchfulness here, and the assistance of the architectural profession can be helpful.

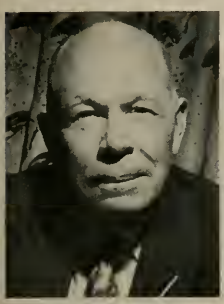
But there are other ways of educating the public, which have a wider (if less intensive) influence. Architectural exhibitions in museums or elsewhere can reach a wide public. If they are well displayed and the captions well worded, these can have an extensive influence.

There is also another way that could be widely educative, and that is the encouragement of newspapers and journals to engage competent architectural critics comparable to the music and literary critics they employ. This is something that would need special initiative on the part of the architectural profession and some mode of gaining security against legal or other punitive action by large architectural firms in case of unfavorable criticisms. For except in a few journals like the New Yorker, which seems to have plenty of financial backing, one looks in vain for articles or columns of architectural criticisms. I have heard that the newspapers do not dare have architectural critics for fear of reprisal. A painter or poet or musician has no way of hurting a big daily. But there is, I have heard, fear that a big architectural firm might well do so. The result is unfortunate for there is no quicker way of arousing public interest and encouraging public discrimination in architecture than by developing a vigorous controversy over the quality of a building. If it is true that this sort of fear is muzzling the press, the architectural profession would do well to take what measures are necessary, even at some cost, to unmuzzle it. They might even subsidize critics to advantage. Quite apart from the accusations of being poor sports, a profession which keeps its achievements closed to free discussion likewise keeps them closed to

public evaluation. If a thing can be given no worth, it is not known or appreciated, and presently comes to be thought of as worthless. To show up the worth of a good thing and the unworthiness of its opposite, what is more educative and beneficial than such an aesthetic discussion as the one that has just now been going on over the Ferry Building Plaza? Every architect should welcome free public criticism of his works for his own instruction(since who is omniscient?), but more especially for its educative value to his public. For by such means the architects' achievements can become publicly elevated to the place of great community worth which in truth when successful they do possess, and, through the ages, have always possessed. Directly or indirectly, the public today is becoming more and more the architects' principal client. If this client is not educated to the worth of a building as a work of art, the architect will often be tempted to compromise his work.

GLADDING, McBEAN FORMS ARCHITECTURAL DIVISION

Formation of an Architectural Division, a consolidation of Hermosa tile and masonry products, has been announced by Gladding, McBean & Company, with Verne W. Boget, who has been vice-president and general manager of the firm's Hermosa tile division, being named as vice-president and general manager of the new Division.



VERNE W. BOGET
Promoted

In announcing the new Architectural Division, the firm also announced a number of personnel changes, including: Pete Vogel, for 5 years vice-president in charge of sales in the 11 western states for Miracle Adhesives, has been appointed general sales manager for Hermosa tile and other tile products, with offices in Los Angeles.

Raymond H. Brown has been named general sales manager of masonry products and will maintain offices in San Francisco.

For Northern California located at the San Francisco office, R. A. Sinnott will continue as tile area sales manager; E. O. Crocker has been promoted to masonry products area sales manager; P. C. Hermann has been promoted to masonry products estimator and salesman; and A. E. Barnes will continue as masonry products promotion manager.

For Southern California located at the Los Angeles office, E. P. Filsinger has been promoted from Hermosa tile promotion manager to area sales manager; and M. A. Daly will continue as masonry products area sales manager.

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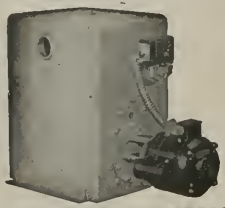

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

GEOLOGY AND OURSELVES. By F. H. Edmunds. Philosophical Library, Inc., Publishers. 15 E. 40th Street, New York, N. Y. Price $10.00.

For more than 30-years a member of the staff of the Geological Survey of Great Britain, the author has a wide and varied experience of the economic applications of geology. His opinion on geological matters has been sought by engineers, architects, surveyors, builders, stonemasons, farmers, waterboards, local authorities, and by the military services in both peace and war.

Edmunds has written this book to show the importance of geology in our everyday lives, and explains how the geologist can deduce the subterranean contents and structures of the land from observations made on the ground surface, or from a study of the geological map. The comparatively new studies of geophysics, geochemistry and soil mechanics are introduced, and the special meaning given to the word "soil" by engineers is defined.

The book is clearly written and is illustrated with numerous diagrams and photographs.

THE MODERN CHURCH. By Edward D. Mills. Frederick A. Praeger, Publishers. 105 West 40th Street, New York City 18, N. Y. Price $9.75.

This is a practical book about the design and construction of the twentieth-century church, the church specifically designed to fulfill the needs of the clergy and congregation of the present day. It is intended to be of value to members of the clergy and those concerned with church administration, as well as to those architects engaged in the provision of new churches and subsidiary buildings for Christian communities of whatever denomination.

One of the first books to illustrate an extensive collection from the most interesting examples and projects, it shows how architects have handled the problem of designing to meet

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present day needs, and in terms of modern building methods and materials—a building type with a very long historical tradition.

The author, a well-known practicing architect, has expert knowledge and wide experience of the subject.

SIZING OF SERVICES, METERS AND HOUSE PIPES. By Oscar G. Goldman, B.S. Columbia Graphs, Columbia, Conn. Price $4.00.

Here is a book that will give you the answers to many problems dealing with water pressure in the home, and will also eliminate any guesswork as to the pipe sizes and other installations to be used. It gives the means by which the proper size of services, meters and house pipes can be determined, with the assurance of satisfactory and effective operation. Oscar B. Goldman, the author, is superintendent, City Distribution Division, San Francisco Water Department, and relates data and methods of solution of more than 7,000 "poor pressure" complaints over a four year period in the City of San Francisco. In all cases where his suggested recommendations have been followed, no further complaints of "poor pressure" have been reported. A practical book of essential information and principles that influence the design, construction, and use of piping systems.

MODERN NAVAL ARCHITECTURE. By W. Muckle, M.Sc., M.I.N.A., M.I.Mar.E. Philosophical Library, Inc., 15 E. 40th St., New York 16. Price $4.75.

A survey for the benefit of the busy technical man and student who needs to keep his knowledge of modern technical progress in this field up to date with major developments of recent years in the field of naval architecture. As a background the author discusses various factors which affect design and efficiency of different types of ships, then presents an expert analysis of such problems as resistance, stability, propellor design, accommodation, prevention of fire and elimination of rolling vibration. Detailed descriptions are included of full-scale structural experiments.

SUBSTRUCTURE—Analysis and Design. By Paul Anderson. 2nd Edition. The Ronald Press Co., 15 E. 26th St., New York 10. Price $7.00.

Nearly eight years have elapsed since the first edition of this book, and many developments in the field of foundation engineering have necessitated a revision of the subject matter. The pedagogical objectives to present the various phases of substructure analysis and design, clearly and logically for the benefit of the student has been supplemented by a further objective, to make the book more useful to the practicing engineer. New design information has been included in nearly every chapter. The author, Paul Anderson, is Professor of Structural Engineering at the University of Minnesota, and in this book has dealt with analysis and design in such a manner as to prove most useful in the field of structural engineering.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Sixteen hundred American standards. Just published; about 275 in the field of civil engineering and construction; includes codes for building and plumbing, test methods and specifications for building materials of all types, fire tests and safety precautions in construction, modular co-ordination and many other releated items; describes work of the American Standards Association. Free copy write American Standards Association, 70 E. 45th St., New York 17, N. Y.

Fluorescent and incandescent lighting equipment. New Catalog (AIA FILE 31F) emphasizes basic design principle of diffuse lighting to duplicate natural, glare-free light as closely as possible at low cost; data represents 35-years of research, design and fabrication of quality lighting equipment. Copy available, write DEPT. A&E, Ainsworth Lighting, Inc., 38-10 28th St., Long Island City 1, N. Y.

Modern outdoor lighting. A new 2-color guide to modern outdoor lighting for shopping centers, suburban businesses, and commercial parking lots; defines basic lighting terms for the layman and provides a guide for planning outdoor lighting installations; describes several applications of effective outdoor lighting and shows adequate lighting helps increase sales; provides a table designed to help make preliminary

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plans for outdoor lighting installation. Copy available write DEPT.-A&E, General Electric, Schenectady 5, N. Y.

How to bend rigid or thinwall conduit easily and accurately. New folder illustrates complete line of pipe benders; features exclusive calibrated degree scale vital for making accurate repeat bends with ease; fully describes each model—capabilities, performance data and bending circles for rigid or thinwall conduit; complete operating instructions; includes prices and unit parts and features, exploded view with parts numbered for identification purposes. Free copy write DEPT.-A&E, Gustave Lindseen, Inc., 1000 1st St., Hayesville, North Carolina.

Steel boilers for residential installations. A new 4-page, illustrated catalog covers 4-sizes of Pacific "Plate Flue" steel boilers; illustrates how jackets extend sufficiently outward from front to completely enclose any make of oil or gas burner; SBI net steam ratings from 400 to 900 sq. ft., and SBI net water ratings from 108,000 to 243,000 BTU per hour; statistical and engineering data. Free copy write DEPT.-A&E, Pacific Steel Boiler Division, Johnstown, Pa.

New liquid bonding agent. New 8-page folder, dscribes THOROBOND, a new liquid bonding agent for improving adhesion between old and new concrete, plaster, and many other materials; describes material, qualities and application methods; typical uses are illustrated. Write for copy DEPT.-A&E, Standard Dry Wall Products, Inc., New Eagle, Penn.

Asbestos transitop. A 36-page book dealing with this insulating structural panel for heavy and light construction; explains how Transitop is made with an insulating board core faced on both sides; describes uses in curtain wall construction over either steel or wood framing; uses for roof decks, and interior walls; profusely illustrated; gives accessories required, and design data. Copies available, write DEPT-A&E, Johns-Manville, 22 E 40th St., New York 16, N. Y.

Adjustable lighting fixtures. New Catalog describing and explaining adjustable lighting fixtures, incandescent and fluorescent; new models, finger-tip control and ultra-flex arms. Free copy write DEPT-A&E, The O. C. White Co., 15-21 Hermon St., Worchester 8, Mass.

Swimming pool data book. New Catalog and Data Book (AIA File No. 35-F-2) on swimming pool supplies, chemicals and equipment; 52-page book, profusely illustrated containing data, photographs and prices of every item needed to build a new residential or public swimming pool, or to equip and maintain an existing pool; section on pressure systems for private and public pools; charts for selection of proper size filter; section on proper pool care and maintenance, and detailed descriptions of approved water treatment chemicals. Designed to assist builders, architects, engineers and institutional and school administrators. Free copy write DEPT-A&E, Modern Swimming Pool Co., Inc., 1 Holland Ave., White Plains, N. Y.

School lighting. New brochure describes cold cathode lamps and fixtures (AIA File 31-F-21); illustrated to show proper installations; chart gives proper UL type fixture combinations for new installations and for modernizing older classrooms; detail drawings. Free copy available, write DEPT-A&E, Celine, Inc., Batavia, Ill.

ARCHITECTS...

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ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY LeROY CONSTRUCTION SERVICES. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage and labor travel time must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$46.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Erected—

Clear Glazed—	
2 x 6 x 12 Furring	$1.75 per sq. ft.
4 x 6 x 12 Partition	2.00 per sq. ft.
4 x 6 x 12 Double Facad Partition	2.25 per sq. ft.
For colored glaze add	.30 per sq. ft.

Mantel Fira Brick $150.00 per M—F.O.B. Pittsburgh.

Fira Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll	$5.30
2 ply per 1000 ft. roll	7.80
3 ply per 1000 ft. roll	9.70
Brownskin, Standard 500 ft. roll	6.85
Sisalkraft, reinforced, 500 ft. roll	8.50
Sheathing Papers—	
Asphalt sheathing, 15-lb. roll	$2.70
30-lb. roll	3.70
Dampcourse, 216-ft. roll	2.95
Blue Plasterboard, 60-lb. roll	5.10
Felt Papers—	
Deadening felt, ¾-lb., 50-ft. roll	$4.30
Deadening felt, 1-lb.	5.05
Asphalt roofing, 15-lbs.	2.70
Asphalt roofing, 30-lbs.	3.70
Roofing Papers—	
Standard Grade, 108-ft. roll, Light	$2.50
Smooth Surface, Medium	2.90
Heavy	3.40
M. S. Extra Heavy	3.95

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—

Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl. 3.59

Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.

Cash discount on L.C.L. 2%

Trinity White, Medusa White, Calaveras White — { 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk. $13.15

Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite

¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $10.00 per square.

Membrane waterproofing—4 layers of saturated felt, $12.00 per square.

Hot coating work, $6.00 per square.

Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.

Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$20 to $25 per outlet for conduit work (including switches). Knob and tube average $9.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.25, clay or shale, $2.00 per yard. Trucks, $35 to $55 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $275 installed on new buildings; $325 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.

Composition Floors, such as Magnesite, 40c-$1.25 per sq. ft.

Linoleum, standard gauge, sq. yd. $2.75

Mastipave—$1.50 per sq. yd.

Battleship Linoleum—⅛"—$3.00 sq. yd.

Terazzo Floors—$2.00 per sq. ft.

Terazzo Steps—$2.50 per lin. ft.

Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—

Oak Flooring—T & G—Unfin.—

	⅝x2¼ $	½x2 $	⅜x2 $	¼x2 $
Clear Otd., White	$425	$405		
Clear Otd., Red	405	380		
Select Otd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	390.00	370.00
⅝ x 2¼	390.00	381.00
⅝ x 2¾	375.00	355.00
⅝ x 3¼	395.00	375.00
⅝ x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

⅝ x 2¼ First Grade	$390.00
⅝ x 2¼ 2nd Grade	365.00
⅝ x 2¼ 2nd & Btr. Grade	375.00
⅝ x 2¼ 3rd Grade	240.00
⅝ x 3¼ 3rd & Btr. Jtd. EM	380.00
⅝ x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00

Floor Layer Wage $2.83 per hr.

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	45 per □ ft.
Plate Glass, ¼ polished to 75.	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
7/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
7/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
7/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
7/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—Installed

Furnaces—Gas Fired	
Floor Furnace, 25,000 BTU	$42.00- 80.00
35,000 BTU	47.00- 87.00
45,000 BTU	55.00- 95.00
Automatic Control, Add	39.00- 45.00
Dual Wall Furnaces, 25,000 BTU	72.00-134.00
35,000 BTU	149.00
45,000 BTU	161.00
With Automatic Control, Add	45.00-161.00
Unit Heaters, 50,000 BTU	215.00
Gravity Furnace, 65,000 BTU	210.00
Forced Air Furnace, 75,000 BTU	342.00
Water Heaters—5-year guarantee	
With Thermostat Control,	
20 gal. capacity	96.00
30 gal capacity	112.00
40 gal. capacity	135.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less then 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(1") ..... $41.60 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—1/2" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—

Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common O.P. or D.F., per M. f.b.m. $110.00

Flooring—

	Per M Delvd.
V.G.-D.F. 8 & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
1/4-inch, 4.0x8.0 SIS $100.00
1/2-inch, 4.0x8.0-5IS 150.00
3/4-inch, per M sq. ft. 210.00
Plysform 87.00

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—1/2" to 3/4" x 24/26 in handsplit tapered or split resawn, per square $15.25
3/4" to 1 1/4" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.
Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work	per yard	$ .75
Three-coat work	per yard	1.00
Cold water painting	per yard	25c
Whitewashing	per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Wholesale Raw	Boiled
Light iron drums ..... per gal.	$2.28	$2.34
5-gallon cans ..... per gal.	2.40	2.46
1-gallon cans ..... each	2.52	2.58
Quart cans ..... each	.71	.72
Pint cans ..... each	.38	.39
1/2-pint cans ..... each	.24	.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
1/2-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (50ft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead Red Lead in Oil

Price to Painters—Price Per 100 Pounds	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$	$
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.50
Keene cement on metal lath	4.00
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.50
Ceilings with ¾ hot roll channels metal lath plastered	5.00
Single partition ¾ channels and metal lath 1 side (lath only)	3.50
Single partition ¾ channels and metal lath 2 inches thick plastered	8.50
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	6.00
4-inch double partition ¾ channels and metal lath 2 sides plastered	10.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$3.00
3 coats cement finish, No. 18 gauge wire mesh	4.00

Lime—$4.25 per bbl. at yard.
Processed Lime—$4.50 per bbl. at yard.
Rock or Grip Lath—⅜"—35c per sq. yd.
Rock or Grip Lath—⅝"—32c per sq. yd.
Composition Stucco—$4.50 sq. yd. (applied).

PLUMBING—

From $250.00 - $300.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply ..... $16.50 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.

Asbestos Shingles, $27 to $35 per sq. laid.
½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 4-in. ..... $ .26
Standard, 6-in. ..... .46
Standard, 8-in. ..... .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless,
(unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$325 & up per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - 3/16" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile	F.O.B. S. F.
Scored 12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
6 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—
8x5½x12-inches, per M. $139.50
6x5½x12-inches, per M. 105.00
4x5½x12-inches, per M. 84.00
Hollow Tile—
12x12x2-inches, per M. $146.75
12x12x3-inches, per M. 156.85
12x12x4-inches, per M. 177.10
12x12x6-inches, per M. 235.30
F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)

Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)

Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)

CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: Continental Bldg. Products Co., 178 Fremont St.
Seattle: Foster-Bray Co., 2412 1st Ave. So.
Spokane: Bernhard & Schafer, Inc., West 34, 2nd Ave.
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd So.
Dallas: Offenhauser Co., 2201 Telephone Rd.
El Paso: Architectural Products Co., 506 E. Yandell Blvd.
Phoenix: Haskell-Thomas Co., 3808 No. Central
San Diego: Maloney Specialties, Inc., 823 W. Laurel St.
Boise: Intermountain Glass Co., 1417 Main St.

ARCHITECTURAL VENEER (3)

Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave. West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067

Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601 Franklin Building
Pasadena 8: P. O. Box 186. East Pasadena Station

Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)

CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)

Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206

Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)

GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)

Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)

GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS (*38)

BUILDING PAPERS & FELTS (9)

ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)

THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)

FINK & SCHINDLER, THE; CO.
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)

IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)

Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643

Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B. St. - Yd. 2, RI 4307

CONSTRUCTION SERVICES (11a)

LE ROY CONSTRUCTION SERVICES
San Francisco, 143 Tird St., SU 1-8914

DECKS—ROOF (11b)

UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)

THE BILCO COMPANY
New Haven, Conn.

Electric Doors
ROLY-DOOR SALES CO.
San Francisco, 5976 Mission St., PL 5-5089

Folding Doors
WALTER D. BATES & ASSOCIATES
San Francisco, 693 Mission St., GA 1-6971

Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tuscon, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas

Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)

MICHEL & PFEFFER IRON WORKS (*38)

FIREPLACES (14)

Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)

Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861

Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)

Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)

Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way

Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-0188

Sleepers (composition)
LE ROY OLSON CO.

GLASS (16)

W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(2)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2050
Seattle: Securities Bldg., SE 5028
Spokane: Realty Bldg., MAdison 6175
San Diego: 514 Spreckels Bldg., BElmont 4-6082
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

INTERCEPTING DEVICES (10a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3142

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)
KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., PArtsmouth 7-6760

METAL FRAMING (22b)
UNISTRUT SALES OF NORTHERN CALIFORNIA
Berkeley: 1000 Ashby Ave., TH 3-4964

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
W. P. FULLER COMPANY *(16)
Paint

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8322

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
E ROY OLSON CO. *(15)

ROOF TRUSSES (30a)
EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (31)
GLADDING, McBEAN & CO. *(3)

SHADES (31a)
SHADES, Inc.

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388
Burlingame, 1805 Rollins Rd., OX 7-3630
Los Angeles, 5415 York Blvd., CL 7-3939

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(33)
HERRICK IRON WORKS *(33)
SAN JOSE STEEL CO. *(33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(33)

SWIMMING POOL FITTINGS (34a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143

POOLS
SIERRA MFG. CO.
Walnut Creek, Calif.: 1719 Mt. Diablo Blvd.

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800
GLADDING, McBEAN & CO. *(3)
KRAFTILE
Niles, Calif.: Niles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash.
WYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

TRUCKING (36a)
PASSETTI TRUCKING CO.
San Francisco 3: 264 Clementina St., GA 1-5297

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WEATHERSTOP
TECON PRODUCTS, LTD.
Vancouver, B.C. 681 E. Hastings St.
TECON PRODUCTS, INC.
Seattle 4, Washington 304 So. Alaskan Way

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	[A]3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	[B]2.86	[B]2.86	[C]2.835	[B]2.86	[D]2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	[E]2.785	[E]2.785	[E]2.785	[E]2.785	[E]2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	[F]2.61	[F]2.61	[F]2.61	[F]2.61	[F]2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		[G]3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	[H]2.16	[H]2.16	[H]2.16	[H]2.16	[H]2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	[I]3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	[J]3.18	[J]3.18	[J]3.18	[J]3.18	[J]3.18
PLASTERER	3.5625	3.54	3.54	3.375	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	[K]3.075	3.075	3.075	[L]3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	[M]2.77	[M]2.77	[M]2.77	[M]2.77	[M]2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	[N]2.265	[N]2.265	[N]2.265	[N]2.265	[N]2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

[A] $3.55 effective Sept. 1, 1955
[B] $2.90 effective Sept. 15, 1955
[C] $2.90 effective Oct. 15, 1955
[D] $2.95 effective Sept. 15, 1955
[E] $2.825 effective Sept. 15, 1955
[F] $2.65 effective Oct. 31, 1955
[G] $3.20 effective Nov. 1, 1955
[H] $2.20 effective Sept. 15, 1955
[I] This is the metal furring lather rate, which increases to $3.675 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
[J] $3.24 effective Oct. 31, 1955
[K] $3.15 effective Sept. 1, 1955
[L] $3.125 effective Nov. 1, 1955
[M] $2.86 effective Oct. 31, 1955
[N] $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds
California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw 1%P; 4%v	7½cw 1%P; 4%v	7½cw 1%P; 4%v	1%P	7½cw 1%P	7½cw 1%P; 4%v	7½cw 1%P	7½cw 1%P; 4%v	7½cw 1%P		10cw 1%P	1%P	7½cw 1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw ICAOM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw ICAOM	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; 2½cJIB 12½cv; 10cP	10cw 12½cv	10cw 1½cA	10cw 10cP; IcA	10cw 12½cv	10cw 10cP; IcA	10cw	10cw IcA			10cw	10cw	10cw
ROOFER	7½cw 7½cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw	7½cw 5cv	7½cw	8½cw	10cv		8½cw 10cv	7½cw 10cv
SHEET METAL WORKER	7½cw	7½cw 3¼cv	7½cw 3¼cv	7½cw 2%v	7½cw	7½cw	7½cw 7½cv	7½cw 4%v	8½cw 6½cv	8½cw 6½cv	8½cw	8½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; 10cP 12½cv; 2½cJIB	10cw IcA	10cw IcA	10cw 10cP; IcA	10cw 12½cv	10cw 10cP; IcA	10cw	10cw IcA			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½%w ¼%PROM				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table I.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

FREEZER AND PROCESSING PLANT, Santa Maria, Santa Barbara county. Santa Maria Freezer and Cold Storage Plant, Santa Maria, owner. Freezer building 61,600 sq. ft. of area, covered dock with 11,200 sq. ft.; 2-processing buildings, one with 16,000 sq. ft. area and other 40,000 sq. ft. floor space; warehouse with 16,000 sq. ft. area and office and restroom building — $500,000. ENGINEER: Hugh M. O'Neil, Engineer, 610 16th St., Oakland. GENERAL CONTRACTOR: Howson Bros., 738 N. Monterey, Gilroy.

STORE & WAREHOUSE, Santa Rosa, Sonoma county. Odd Fellows Lodge Hall Association, Santa Rosa, owner. 1-Story reinforced concrete walls, wood roof and composition roofing, concrete floors — $193,618. ARCHITECT: J. Clarence Feliciano, 4010 Montecito Ave., Santa Rosa. GENERAL CONTRACTOR: Rapp, Christensen & Foster, 705 Bennett Ave., Santa Rosa.

LABORATORY, Emeryville, Alameda county. Shell Development Co., Emeryville, owner. 1-Story reinforced concrete construction, 27x33 ft. — $34,000. GENERAL CONTRACTOR: Swinerton & Walberg, 1723 Webster St., Oakland.

WAREHOUSE, Torrance, Los Angeles County. H. F. Redeker, Torrance, owner. Concrete block warehouse, composition roofing, concrete slab, plumbing, electrical, overhead doors, transom and casement windows, asphalt paving; 10,000 sq. ft. area. ENGINEERS: Quigley & Clark, Engineers & Architects, 43 Malaga Cove Plaza, Palos Verdes Estates.

INTERMEDIATE SCHOOL, Huron, Fresno County. Huron Elementary School District, Huron, owner. Frame and stucco construction; 8-classrooms, home-making, shop, cafeteria, kitchen — $471,586. ARCHITECT: Horn & Mortland, 2016 Merced St., Fresno. GENERAL CONTRACTOR: Remco Construction Co., P. O. Box 152, Avanel.

OFFICE BLDG., Riverside, Riverside County. Harold Thompson, Riverside, owner. 1-Story, two-unit office building, structural steel, composition roofing, aluminum and plate glass store front, field stone, slab and asphalt tile floors, acoustical plaster ceilings, winter and summer air conditioning, toilet facilities, ceramic tile, roof insulation, exterior and interior planters, interior movable partitions, plumbing, electrical work; 6000 sq. ft. area. ARCHITECT: Robert D. Miller Associates, Edwin B. Hendricks, Architect, 4224 Luther St., Riverside.

VILLAGE ELEMENTARY SCHOOL, near Sacramento. Rio Linda Elementary School District, Rio Linda, owner. Frame and stucco construction; administration offices, 12-classrooms, multi-purpose rooms, kitchen, kindergarten, toilet rooms —$451,487. ARCHITECT: Cox & Liske, Witson W. Cox, Architect, 3020 V St., Sacramento. GENERAL CONTRACTOR: Lawrence Construction Co., 3020 V St., Sacramento.

CLUBHOUSE, Newport Beach, Los Angeles County. Ebell Club, Newport Beach, owner. Precast concrete panel and frame and stucco clubhouse, tapered steel girders, concrete slab, asphalt tile and carpet floors, plaster interior, acoustical plaster ceilings, forced air heating, wood folding doors, aluminum awning sash, wood framed plate glass, ceramic steel lavatories, weatherstripping, stainless steel counter tops in kitchen, stage platform and toilets; 3000 sq. ft. in area. ARCHITECT: J. Herbert Brownell, 1950 W. Coast Highway, Newport Beach. GENERAL CONTRACTOR: Don M. Fletcher, 18722 E. Fairhaven, Santa Ana.

HOSPITAL REMODEL, Community, Watsonville, Santa Cruz County. Watsonville Community Hospital, Watsonville, owner. Interior remodel and install cabinet work, new laboratories—$19,950. ARCHITECT: John I. Easterly, 1310 Lincoln St., Watsonville. GENERAL CONTRACTOR: M. C. Baldwin Co., 30 Buena Vista, Watsonville.

ELEMENTARY SCHOOL, Magnolia School, Anaheim, Orange County. Magnolia School District, Anaheim, owner. New Elementary school containing 20-classrooms, 2-kindergarten, administrative unit, multi-use unit and site development; frame and stucco construction, composition roofing, slab and asphalt tile floors, acoustical work, metal sash, structural steel, heating and ventilating, radiant metal toilet partitions, ceramic tile, metal doors and frames — $541,236. ARCHI-

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TECT: Frick & Frick, 340 N. Foothill Blvd., Pasadena. GENERAL CONTRACTOR: J & A Construction Co., 11324 Magnolia Blvd., North Hollywood.

CANDY FACTORY, South San Francisco, San Mateo County. See's Candy Co., San Francisco, owner. 1-Story and 2-Story reinforced concrete, tilt-up, wood roof; 60,000 sq. ft. area — $300,000. ARCHITECT: J. Francis Ward, 215 Leidesdorf St., San Francisco. GENERAL CONTRACTOR: Engineers, Ltd., 200 Bush St., San Francisco.

OFFICE BLDG., Norwalk, Los Angeles County. Norwalk Asphaltic Concrete, Inc., Norwalk, owner. 1-Story wood frame, board and batton office bldg., composition roofing, insulated roof, wood casement, sash and fixed windows, asphalt tile floor covering, drywall interior, acoustical tile ceiling, forced air heating, fluorescent lighting, toilet rooms; 20x40 ft. in area. ENGINEER: Bostock Engineering Co., 3620 E. Florence Ave., Huntington Park.

MEDICAL BLDG., Oakland, Alameda County. One story frame and stucco construction, stone veneer, concrete floors, aluminum sash, asphalt tile floors, radiant heating; 3000 sq. ft. in area — $51,044. ARCHITECT: Kolbeck & Peterson, 6109 La Salle Ave., Oakland. GENERAL CONTRACTOR: Pearson Construction Co., 1020 39th Ave., Oakland.

HOSPITAL, Lomita, Los Angeles County. Hillside Hospital, Lomita, owner. 28-Bed addition reinforced brick construction, composition roofing, slab and terrazzo floors, plumbing, electrical, air conditioning, wood cabinets, metal sash, elevator, concrete basement, asphalt paving; 14,000 sq. ft. in area. ARCHITECT: Nielsen & Moffatt, 4072 Crenshaw Blvd., Los Angeles. GENERAL CONTRACTOR: Ernest W. Hahn, Inc., 219 S. Hawthorne Blvd., Hawthorne.

BUSINESS OFFICE, Oakland, Alameda County. East Bay Municipal Utility District, Oakland, owner. 1-Story concrete block and structural steel frame; 5000 sq. ft. — $108,700. ARCHITECT: Warnecke & Warnecke, Financial Center Bldg., Oakland. GENERAL CONTRACTOR: J. B. Peterson & Son, 829 36th Ave., Oakland.

PRINT SHOP, Burbank, Los Angeles county. Warner S. Stokes, Van Nuys, owner. Frame and stucco Print Shop building: composition roofing, concrete slab, asphalt tile, interior plaster, steel casement, laminated plastic counter tops, fluorescent lighting, plate glass, overhead doors, electrical plumbing work. STRUCTURAL ENGINEER: Clare Slaughter, 2316 W. Burbank Blvd., Burbank.

SERVICE STATION, facilities and Office Area. Municipal Airport, Sacramento. Hertz Corpn., Sacramento, owner. 1-Story, steel frame, frame and stucco construction — $73,858. ARCHITECT: Stark, Jozens & Nacht, Native Sons Bldg., Sacramento. GENERAL CONTRACTOR: United Const. Co., 3839 Riverside Blvd., Sacramento.

REAL ESTATE OFFICE, Vallejo, Solano county. Hewitt & Larsen & Co., Vallejo, owner. 1-Story concrete block, wood roof, concrete floors—$38,695. ARCHITECT: Lillis & Smith, 912 Tennessee St., Vallejo. GENERAL CONTRACTOR: Marshall Kent, 2309 Main, Napa.

AUTO SERVICE BLDG., San Jose, Santa Clara county. St. Claire Motors Inc., San Jose, owner. 1-Story reinforced concrete tilt-up construction, wood roof trusses and wood roof; 100x87 ft.—$61,000. ARCHITECT: Leo W. Ruth, Jr., 919 The Alameda, San Jose. GENERAL CONTRACTOR: Leonard Lemas, 2885 Homestead Rd., Santa Clara.

ADMINISTRATION & LIBRARY, Berkeley, Alameda county. Pacific School of Religion, 1798 Scenic Way, Berkeley, owner. Three and one-half story, reinforced concrete construction, elevator—$481,833. ARCHITECT: Ratcliff & Ratcliff, 2286 Fulton St., Berkeley. GENERAL CONTRACTOR: Bishop Mattei Const., Pier 7, San Francisco.

COOKIE BLDG., San Francisco. Mother's Cake & Cookie Co., 810 81st Ave., Oakland, owner. 1-Story reinforced concrete, wood roof trusses, wood roof; 7500 sq. ft. area — $49,700. STRUCTURAL ENGINEER: J. Y. Long Co., 132 9th St., Oakland. GENERAL CONTRACTOR: Beckett & Federighi, 1441 Franklin St., Oakland.

HIGH SCHOOL ADD'N., Elk Grove, Sacramento county. Elk Grove High School District, Elk Grove, owner. Frame and stucco construction to provide additional facilities; 8-classrooms, boiler room, teacher's rooms — $140,200. ARCHITECT: Gordon Stafford, 1024½ I St., Sacramento. GENERAL CONTRACTOR: Dryden Const., 348 N. Lillian St., Stockton.

MFG. BLDG., Burbank, Los Angeles county. Walter R. Mack, Burbank, owner. Reinforced concrete tilt-up panels, gunite columns, composition roofing, inverted tapered steel girders, rotary roof ventilators, skylights, toilet rooms, office and reception area, overhead doors, stone veneer, plate glass, 12,000 sq. ft. area. ENGINEER: James Wisda, Jr., 5257 Beverly Blvd., Los Angeles. GENERAL CONTRACTOR: H. M. Ketter Co., Inc., 2311 Empire Ave., Burbank.

MANDARIN MARKET, Stockton, San Joaquin county. One story concrete block, frame and stucco construction, laminated arches; 12,000 sq. ft. area — $93,778. ARCHITECT: C. T. Wong, 2644 Pacific St., Stockton. GENERAL CONTRACTOR: Rubino & Gullickson, 41 S. Wilson Way, Stockton.

RECTORY, Santa Ana, Orange county. Our Lady of Guadalupe Parish, Santa Ana, owner. Rectory building — $50,750. ARCHITECT: Harold Gimeno, 1416 N. Main St., Santa Ana. GENERAL CONTRACTOR: Julian Const. Co., 1107 Kay St., Compton.

DENTAL LABORATORY, San Jose, Santa Clara county. San Jose Dental Laboratory, San Jose, owner. Concrete block and frame construction Dental Laboratory and Office, cement plaster exterior and plaster interior—$14,900. ARCHITECT: Fred Marburg, 1549 Santa Paula Ave., San Jose. GENERAL CONTRACTOR: Robt. A. Fletcher, 866 Race St., San Jose.

BANK, Palos Verdes Estates, Los Angeles county. Pacific Southwest Realty Co., Palos Verdes, owner. 2-Story reinforced brick and ceramic veneer bank building, mission tile roof, concrete slab, terrazzo and wood floors, acoustic tile ceilings, plumbing, electrical, forced air heating, plate glass, aluminum windows; 7000 sq. ft. area. ARCHITECT: Carrington H. Lewis, 405 Via Chico, Palos Verdes Estates. GENERAL CONTRACTOR: Jackson Bros., 3475 W. 8th St., Los Angeles.

ELEMENTARY SCHOOL ADD'N., David Ave., Pacific Grove, Monterey county. Pacific Grove Elementary School District, Pacific Grove, owner. Frame and stucco addition to provide facilities for 4-classrooms, toilet rooms—$81,519. ARCHITECT: John Lyon Reid & Partners, 1069 Market St., San Francisco. GENERAL CONTRACTOR: Jos. E. Fratessa, P. O. Box 23, Monterey.

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MAJOR GENERAL ITSCHNER BECOMES CHIEF OF ENGINEERS

Major General Emerson C. Itschner, Assistant Chief of Engineers for Civil Works, Washington, D. C., has been appointed Chief of Engineers.

General Itschner began his career with the Army Engineers in 1924 upon graduation from the U. S. Military Academy, and has since handled numerous important phases of military construction and installations, at home and abroad.

CONTRACTOR HARNEY GETS FREEWAY JOB

California director of Public Works Frank B. Durkee, recently announced the awarding of a contract for $1,583,505.00 to Charles L. Harney, Inc., of San Francisco, for extension of the Bayshore Freeway from Willow Road in Menlo Park in San Mateo county to the San Mateo-Santa Clara county line.

The project calls for grading and paving of two-miles of the freeway and the construction of four bridges between 0.4 miles north of Marsh Road and Willow Road.

ARTHUR B. WANDTKE JR. has been appointed manager of products division advertising for Kaiser Aluminum & Chemical Corpn.

SAN LEANDRO PLANT FOR YALE & TOWNE

A new fork truck manufacturing plant is being constructed in San Leandro, California, for the Yale & Towne Manufacturing Company. The factory will have more than 100,000 sq. ft. of floor area and will occupy an 8½ acre site.

Completion of the project is set for early in 1957.

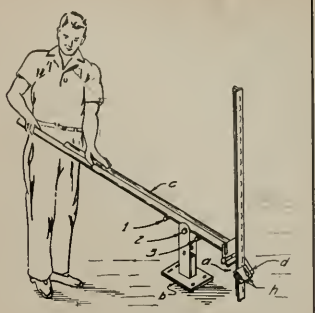
ENGINEER ENLARGES SANTA MONICA OFFICE

C. F. Knowlton, Structural Engineer, announces the opening of new and larger engineering offices at 1220 Lincoln Blvd., Santa Monica. Structural, civil, and mechanical engineering services are specialized in by the firm which formerly maintained offices in Beverly Hills.

UNION HALL AND RECREATION

Architect Clayton Van Wagner, Financial Center Bldg., Oakland, is working on plans and specifications for construction of a Union Hall and Recreation Building to be built at the intersection of Dixon Road and State Highway No. 17, Santa Clara County, for the United Auto Workers Union.

The facilities will represent a type 3,



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masonry and frame construction to provide facilities for offices, meeting rooms, gymnasium, shower and locker rooms, platform-stage, kitchen, swimming pool, and playfields. The estimated cost of the project is $500,000.

NEW HIBERNIA BANK FOR SAN FRANCISCO

The architectural firm of Hertzka & Knowles, 85 Post Street, San Francisco, has designed a compact, modern building to be built for the Sunset District Branch of the Hibernia Bank of San Francisco.

Facilities for customer parking have been provided, as has a "drive-up" teller's window. The site encompases a 9,068 sq. ft. area, with 4,680 sq. ft. being taken up by the building. The main floor houses a banking room, work space, officers, conference room, safe deposit lobby and booths; the mezzanine provides a lunch room, storage, heater room, supply room, janitor's room and rest rooms.

Cost of the project is $90,134.18, equivalent to $19.26 per square ft.

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COUNTY COURT HOUSE LAS VEGAS, NEVADA

Clark county officials have approved preliminary plans submitted by the architectural firm of Welton Becket, FAIA, and Associates of Los Angeles, for the construction of a new Clark County Courthouse to be built in Las Vegas, Nevada, as part of a program to meet the county's present and future needs.

To be built on the site of the existing courthouse, which will be integrated, the building will have an area of 150,000 sq. ft. Cost is estimated to be $3,800,000.

Architectural design of the new facilities will be in association with the firm of Zick and Sharp, AIA Architects, 1806 S. Main Street, Las Vegas.

PARISH HALL BUILDING

Architects Orr, Strange & Inslee, 3142 Wilshire Blvd., Los Angeles are preparing drawings for construction of a 2-story parish hall and educational building in Culver City for the Grace Lutheran Church.

The new building will be of reinforced masonry construction, with concrete slab, wood sub-floor, asphalt tile, acoustical tile, heating and ventilating, and toilet facilities.

LABORATORY AND OFFICE BUILDING

Miles & Korver, Farrel T. Miles, engineer, 1110 S. Robertson Blvd., Los Angeles, are completing drawings for construction of a 2-story, frame and plaster laboratory and office building, in Los Angeles, for the ProSeal Mfg. Co.

The building will contain 3000 sq. ft. of area; composition roofing, concrete slab, asphalt tile and wood floors, plumbing, electrical, aluminum windows. Included is alterations to an existing building.

ARCHITECT SELECTED

Eugene E. Crawford, 920 5th Ave., San Rafael, has been commissioned by the City of San Rafael, to draft plans and specifications for construction of a new Fire House to be built in the City of San Rafael.

HOLY ROSARY PARISH TO BUILD CONVENT

The architectural firm of Arnold & Francis Constable, 95 Spencer Ave., Sausalito, is completing drawings for construction of a Convent in the Holy Rosary Parish of Antioch, for the Roman Catholic Archbishop of San Francisco.

Estimated cost of the project is $50,000.

CHURCH BLDG.

Architect Gates Burrows, 1606 Bush Street, Santa Ana, is completing drawings for construction of the St. Michaels Episcopal Church and Parish Hall for the Bishop of the Missionary District of San Joaquin, Ridgecrest (Kern county.)

The building will be of concrete block, slab floor, steel frame, wood sheathing with composition shingle roof, wood and steel sash, restrooms, study and vesting rooms, kitchen, plaster interior, asphalt tile, forced air heating and air conditioning; 4500 sq. ft. of area and the estimated cost is $50,000.

POLICE STATION NEW JAIL

The architectural firm of Ingle & Weaver, Poulos Bldg., Ukiah, is completing plans for construction of a new jail and police station to be built in the city of Ukiah for the City.

The new facilities will be 1-story, concrete block and frame construction and will cost an estimated $150,000.

REVOLUTIONARY TYPE SHOPPING CENTER

Victor Gruen & Associates, Los Angeles, Architects and Engineers, received nationwide attention recently with the opening in Minneapolis, Minn., of a revolutionary type of shopping center.

The $20,000,000 center, Southdale, is all enclosed under one roof. Its Garden Court, a block long and three stories high,

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DRIVE-IN STEAK HOUSE

Architect Hollis Kogue, Jr., 275 N. 4th Street, San Jose, has completed plans for construction of a 1-story, frame and stucco Drive-In and Steak House to be built in San Jose for the Self-Service Foods, Inc. of San Jose.

Oscar W. Meyer, 1681 Dry Creek Rd., San Jose, is the general contractor.

FRESNO COUNTY LIBRARY

Architect Fred L. Swartz, 627 Rowell Building, Fresno, has completed plans for construction of the Fresno County Free Library in Fresno for the County Board of Supervisors.

Construction will be of reinforced concrete, basement, and 2-floors. The estimated cost of the project is $1,450,000.

HOSPITAL AND CLINIC

Architect Hachiro Yuasa, 5369 Broadway, Oakland, is preparing preliminary drawings for construction of a 15-bed hospital and out-patient clinic to be built in Hoopa, Humboldt county, for the Hoopa Community Health Association.

The new facilities will be 1-story, wood frame, composition roofing, plaster, tile floors, and will contain 15,000 sq. ft. of floor area. Estimated cost is $200,000.

INTER-COMMUNITY MEMORIAL HOSPITAL

The architectural firm of Bolton White & Jack Hermann, 75 Castle Street, San Francisco, is completing drawings for construction of a 30-bed Inter-Community Memorial Hospital to be built in Fairfield, Solano county, for the Central Solano Community Hospital Foundation.

The 1-story, frame, masonry, building will cost an estimated $475,000.

SOILS AND PLANT NUTRITION BLDG.

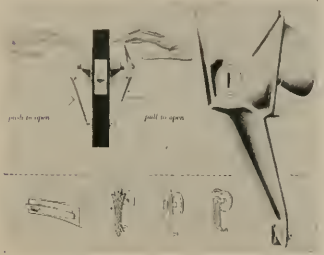
Architects Barovetto & Thomas, 718 Alhambra Blvd., Sacramento, are preparing plans for construction of a $1,250,000 Associated headhouse and greenhouse for the University of California Board of Regents. The new soils and plant nutrition building will be constructed on the Davis campus.

ARCHITECT SELECTED

Architect J. Clarence Felciano, 4010 Montecito Ave., Santa Rosa, has been commissioned by the Pengrove Elementary School District of Pengrove, to draft plans and specifications for construction of a 6-classroom, storage rooms, and toilet rooms addition to the Pengrove Elementary School.

NEW LOCK SET HAS FINGER CONTROL

A new and different kind of door lock set operating on an entirely new and revolutionary principle; only a touch of the finger is required to open or close the door.



A slight push will open the door from one side, a slight pull from the other; no knobs to turn; distinctively styled, several decorative colors and finishes. Styles available for homes and many uses. Complete information from Screw Machine Products Co., 7737 N. E. Killingsworth Ave., Portland, Oregon.

BUILDING Y.M.C.A.

Architect Paul J. Huston, 663 Cowper Street, Palo Alto, is preparing drawings for construction of a 1-story, 18,000 sq. ft. Y.M.C.A. building in Palo Alto.

The facilities will include staff offices, gymnasium, locker rooms, shower rooms, toilets, chapel, lounge area and conference rooms. Estimated cost is $280,000.

LIBRARY CONCORD

Architect Donald Powers Smith, 133 Kearny Street, San Francisco, is preparing drawings for construction of a new Library Building to be built in the new Civic Center of Concord, Contra Costa county, for the City of Concord.

The new facilities will cost an estimated $200,000.

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5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

L. B. Penhorwood, Business Mgr.

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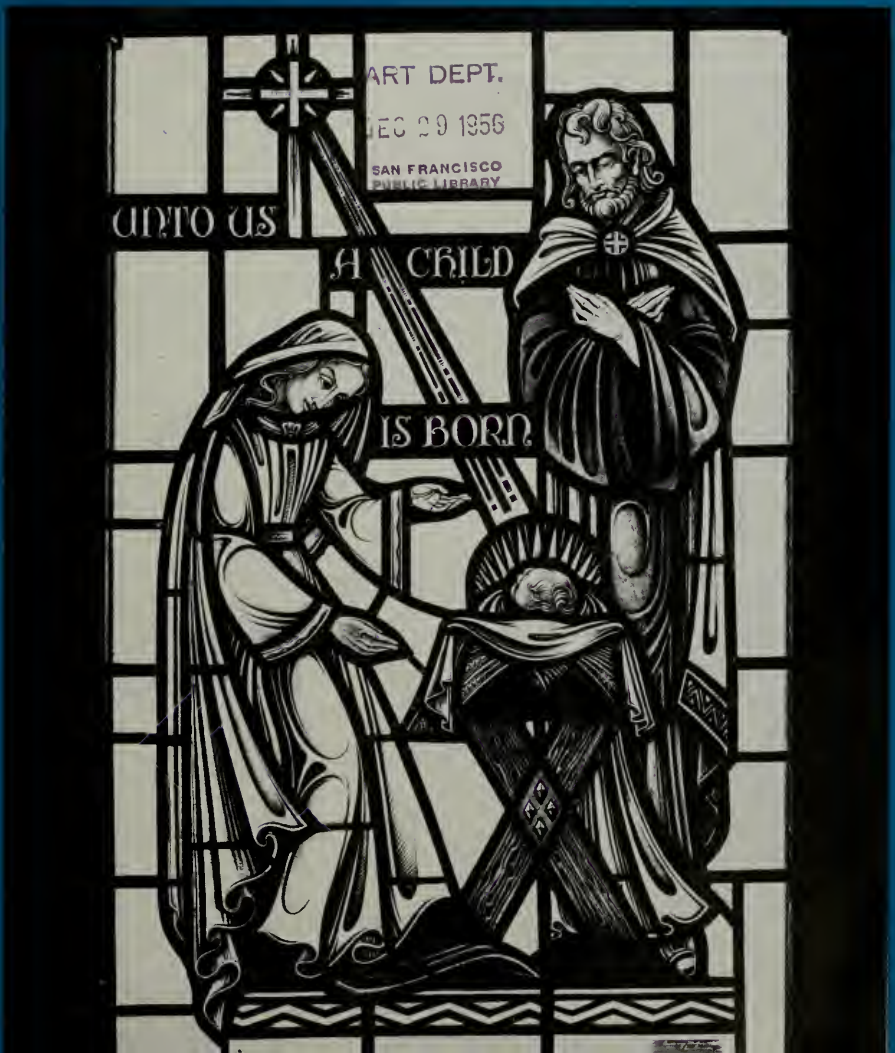

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NATIVITY WINDOW
WASATCH PRESBYTERIAN
CHURCH
SALT LAKE CITY, UTAH

An outstanding example of the use of stained glass windows in church construction throughout the West.
See page 10 for detailed article on Western Churches—Today and Future.

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THE OLDEST PROFESSIONAL MONTHLY BUSINESS MAGAZINE OF THE ELEVEN WESTERN STATES

ARCHITECT AND ENGINEER (Established 1905) is published on the 15th of the month by The Architect and Engineer, Inc., 68 Post St., San Francisco 4; Telephone EXbrook 2-7182. President, K. P. Kierulff; Vice-President and Manager, L. B. Penhorwood; Treasurer, E. N. Kierulff. — Los Angeles Office: Wentworth F. Green, 439 So. Western Ave., Telephone DUnkirk 7-8135 — Portland, Oregon, Office: R. V. Vaughn, 7117 Canyon Lane. — Entered as second class matter, November 2, 1905, at the Post Office in San Francisco,

Merry Christmas

and

Happy New Year

All glory be to God
on high,
And to the earth be peace;
Good-will henceforth
from heaven to men
Begin and never cease!

ARCHITECT AND ENGINEER

OFFICE BUILDING

BEVERLY HILLS, CALIFORNIA

Cost $250,000.00
including the land

Daniel L. Dworsky, AIA
Architect

Excel Construction Co.
General Contractors

This new, modern style, office building, designed by architect Daniel L. Dworsky, AIA, of Beverly Hills, represents another example of a Southern California completely air-conditioned, two-story commerical structure comprising a combination of frame and reinforced brick construction with floors and roof of wood.

Aluminum framed windows and porcelain enamel wall panels have been utilized in the design as well as other structural elements, including an elevator for convenience of the public.

The lobby features a free standing "floating" steel stairway with terrazzo treads. The lobby floor is of terrazzo, while floors in the offices are of asphalt and rubber tile.

The architect's plan provides abundant auto parking space and complete flexibility in arrangement of utility installations.

The building is located at the southeast corner of La Cienega Boulevard and Alcott Street.

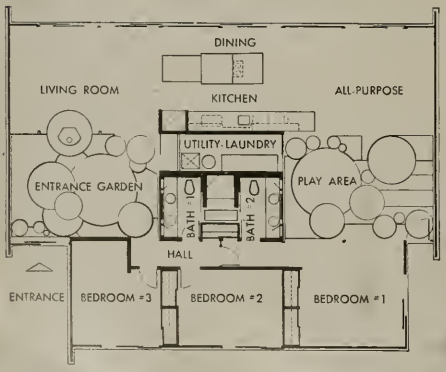
News of another steel home from United States Steel

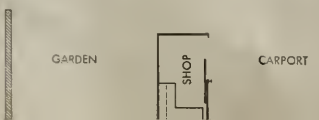
Steel brings the wide open spaces indoors

Eichler Homes' new experimental house, the X-100, takes a long, hard look into the future of production dwellings. Many of the forward-looking features previewed in this research house are steel, or they depend on steel: unconfined, inter-related space, indoor-outdoor integration and maximum design flexibility.

Discussing their interest in steel homes, Edward Eichler underlined the great stability and permanence of steel construction . . . the fact that it doesn't check or warp and paints economically. There's the barest minimum of upkeep necessary with a steel frame house and, of course, termites cease to be a problem.

Entering through this dramatic garden court, you pass into the living, dining, kitchen, all-purpose and children's play area without a wall to break the openness Eichler seeks. Only the bedrooms and "utility core" have partitions (non-bearing) or draw-drapes for privacy (and these can be moved according to the needs of a growing family or new owners.)





The X-100 was designed to utilize standard United States Steel sections: 4" H13# for vertical columns; 8" WF13# and 10" WF17# for roof beams. There was also a variety of small angles, T's and channels involved. Steel roof decking was fabricated by H. H. Robertson.

tect: A. Quincy Jones and
Frederick Emmons, AIA, Los Angeles
Erection: Herrick Iron Works, Oakland
) Location: San Mateo Highlands, Calif.

The thin crisp lines of small steel members produce a light, elegant feeling and a "floating roof." To replace an 8" steel ceiling beam (spanning 26') with a wood member of equivalent strength, the architect would need to specify bulky 16" timbers.

ARCHITECTS & ENGINEERS: If you are interested in receiving more information on the use of United States Steel in residential construction, send us your name and address and we will forward the material as it becomes available. Write; Architects & Engineers Service, United States Steel Corporation, Columbia-Geneva Steel Division, 120 Montgomery Street, San Francisco 6, California.

tern homes of the future are now building with steel... **UNITED STATES STEEL**

NEWS and COMMENT ON ART

OAKLAND ART MUSEUM

The Oakland Art Museum, S.W. corner, Municipal Auditorium at 10th and Fallon streets, is offering a special exhibition of Prints, Sculpture and Paintings for the Holiday Season. The Art Rental Service offers more than 100 works of art in all styles on a three-month rental basis.

CALIFORNIA PALACE OF THE LEGION OF HONOR

The California Palace of the Legion of Honor, Lincoln Park, San Francisco, under the direction of Thomas Carr Howe, Jr., is presenting the following exhibitions and events for December:

EXHIBITS: The Gladys Lloyd Robinson and Edward G. Robinson Collection; Paintings by Cady Wells, A Memorial Retrospective Exhibition; Isadora Duncan, A Selection of Drawings and Sketches by Jules Grandjouan; Drawings by Ernie Palomino; and Paintings by Martyl. The ACHENBACH FOUNDATION FOR GRAPHIC ARTS, loan exhibition at the San Francisco Public Library will feature Religious Prints from Martin Shoengauer to Sister Mary Corita, I.H.M.

EVENTS: Organ program each Saturday and Sunday at 3 p.m. and educational activities including painting classes for children and adults.

SOUTHERN CALIFORNIA FINE ARTS DEPARTMENT USC

"Designs from Britain" exhibition will be held at the University of Southern California Fine Arts Department, University Park, Los Angeles, January 7 through February 6, 1957, according to Donald Goodall, department head.

Recent work by eight British designers in the fields of advertising, industrial design, illustration, typography, display and exhibition, fashion, engineering, packaging, furniture, textiles, interior design and housewares will be displayed in a series of photographs and actual samples.

SAN FRANCISCO MUSEUM OF ART

WAR MEMORIAL BUILDING CIVIC CENTER

TWO APPLE TREES

Woodcut

by

EMILY SCHORR ELMAN

Awarded a Purchase prize in the 20th Annual Drawing and Print Exhibition of the San Francisco Art Association, showing at the San Francisco Museum of Art through December 30.

CALIFORNIA SCHOOL OF FINE ARTS

The California School of Fine Arts, 800 Chestnut St., San Francisco, is featuring the Third Exhibition of Paul Wonner, December 14th through January 4, 1957. Comprising a selection of 14 oils and five in sculpture, an exhibition of the work of Wally Hedrick, native Californian, was shown during early December.

CITY OF PARIS

The Rotunda Gallery of the City of Paris, San Francisco, under the direction of Beatrice Judd Ryan, Curator, in keeping with the spirit of the holidays, has arranged a special Christmas show by fifty artists of the Rotunda Circle entitled "From an Enchanted Garden· Fruit and Flower Compositions, Birds, Butterflies, Bees". Prizes for work will be awarded during the show which will end on January 3rd.

M. H. DE YOUNG MEMORIAL MUSEUM

Golden Gate Park San Francisco

THE ADORATION OF THE MAGI

Rodrigo De Osono
The Younger

Spanish

Late 15th, early 16th Century

From the Samuel H. Kress Collection.

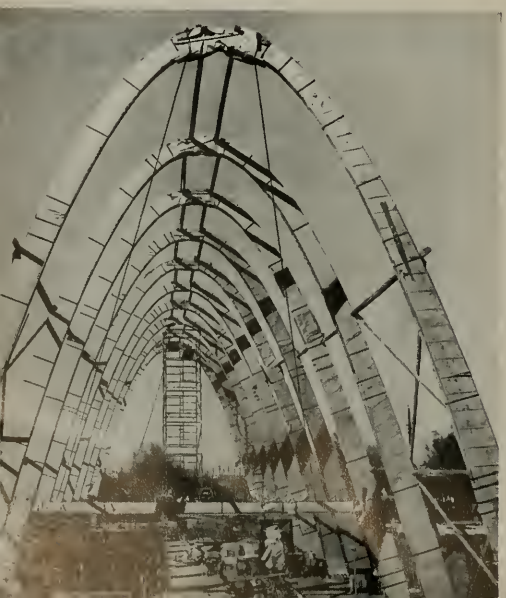
HOLY CROSS LUTHERAN CHURCH

Wichita, Kansas

Ramey & Himes, AIA Architects

WESTERN CHURCHES

TODAY and FUTURE



By ARTHUR W. PRIAULX

The great church building boom which got under way right after World War II has not abated one bit, but, rather, seems to gain added momentum each year.

As significant as the sheer numbers of churches being built is the almost universal acceptance by church architects of a distinctly contemporary design, rather than the classical styling of the past, which would seem to indicate a much more reasonable attitude regarding church architecture.

Dramatic illustration of simplicity of erection with laminated arches.

This is certainly not an accidental or whimsical tendancy, for it has gone far beyond such a point. Today, it is the exception to see a new church designed entirely in the classical mold. The modern church in the contemporary theme, with all its wide variations, is definitely the result of new forces both from within and without the church which are compelling architects and churchmen to adopt a completely new mode of thinking on this subject.

Noted New York church architect Maurice R. Salo believes that new engineering and structural materials have had an important impact on the present trend in church design by releasing architects from the severe limitations of classical styles which in turn were based upon the structural limitations of stone.

Salo says about these new materials, such as the glu-laminated wooden arches and trusses and reinforced concrete and steel: "They have emancipated proportion . . . thereby creating almost infinite, new possibilities in form."

He hastens to add, however, that "the rigid discipline in harmonic relationship of form which was characteristic of classical styles evolved by generations of able artists, still must be applied in principle to our future design. Whereas the harmonies in those styles were relatively simple, we must now deal with unlimited variations and with little precedent to follow. This places a great burden upon the resourcefulness of the architect to find composition, dignity and beauty within these vastly expanded horizons."

Today, the building operation finds itself faced by organized labor with its high standards of living, shorter workdays and higher wages. Yet, the church architect must adhere to a reasonable budget. And, while the program of needs for the church plant grows more lavish, economies must be effected by adopting a more realistic approach to design. This is simply a basic recognition of our industrial age and the legitimate exploitation of its possibilities.

All of this obviates fighting for forms and ways of life that are valid no longer. In his search for the answer to church construction within the limitations

Heavy haunches of the fir arches provide support for this church.

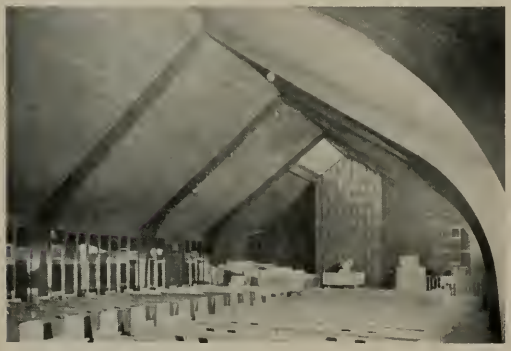
First Bible Presbyterian Church, Colorado Springs, Colorado, designed by Wolter H. Weber, in native stone and wood.

TEMPLE BAPTIST CHURCH

Colorado Springs, Colorado

Walter H. Weber, *Architect*

Sharp roof line stands out in striking relief to surrounding terrain.



FIRST COVENANT CHURCH

Portland, Oregon

Edmundson and Kochendoerfer, *Architects*

Interior at left shows solid deck of laminated 2-by-4's of hemlock—view below shows wide overhonging roof at entrance for shelter from sun and rain.

of all of the above factors, the architect has found a solution in the fluidity of contemporary styling.

While the fine, old churches of the past were dignified, awe inspiring and massive, the contemporary church form is dramatic, exciting, friendly and inviting, and it might well be that this change has had more impact on the new interest of non-church goers and the rapid increase in church membership than any other single factor.

Certainly the intriguing styling of the contemporary church is less foreboding than some of the great piles of masonry which connect this generation with the past.

It has been suggested by Architect Salo that the impact of mass production, which has given us an almost infinite quantity of new building materials such as plastics, glass, metals and shop-grown timber structures, has forced the architect to employ and to incorporate the textures and rhythm of standard units

and their improved applications into the expression of his finished product.

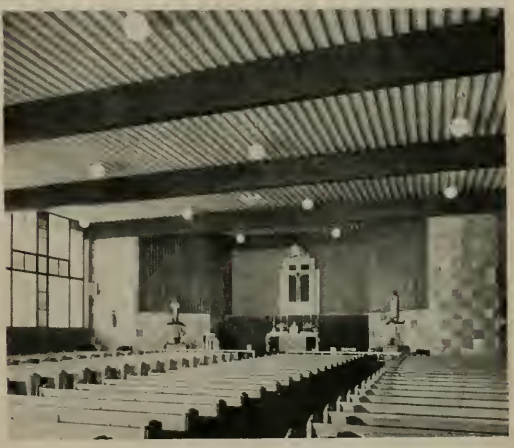
This is a radical departure from the inherent character of classical architecture which reflected in its feelings the tool mark of the skilled artisan—each stone cut by hand and each carving the product of an individual craftsman. The final church was the result of many individuals, and because of their basic limitation of stone, the finished product was generally imposing, but was hard and cold in comparison to some of the beautiful churches now being designed in the contemporary theme. There are few skilled craftsmen, the likes of which passed down their skills and trade secrets from father to son, and who would spend a lifetime on some vast cathedral. Our generation has neither the patience nor the dedication for such.

What is happening in the West in church design? Has there been any departure from the thrilling and beautiful churches we have been designing in the post-war years? Have new methods been discovered to get more out of the new structural materials which the church architect has available today? A visit to some of the outstanding western churches only recently completed will give us many of the answers.

While we are at it, we might well ask ourselves the question? "Just how long can this church boom continue?" The answer may be in the great renaissance in church going, with church membership up from 65 million in 1940 to a record smashing 100 million plus today. Church construction which reached $588 million in 1954, was up to $734 million in 1955 and topped one billion in 1956.

Economy seems to be the governing factor in many church projects, according to Walter H. Weber, prominent Colorado Springs architect who has designed some outstanding church structures in his region. It seems that Architect Weber has never had to sacrifice quality or beauty because of limited available funds.

His First Bible Presbyterian Church of Colorado Springs (see page 11) is an example of how far the architect today has departed from the ecclesiastical forms of yesteryear in his approach to church design. This low rambling church of stone and wood hugs its hillside site with a friendliness expected of the modern place of worship, yet it has none of the outward form of the church; no steeple, no vaulted roof line. It is an efficient, functional building. The key to the success of this structure is undoubtedly found in the interesting and exciting use of one of the new structural materials, the glu-laminated gothic style arches. Built up heavy in the haunch, the beams were designed to support the simple low roof section of double tongue and groove fir decking, as well as the simple curtain wall. Using the gothic arch, it was not necessary to



Wide nave is no problem for these laminated beams in this church.

Divine Redeemer Church School, Colorado Springs, Colorado. Designed by Toll and Milan, Architects, presents unique flat roof style architecture.

TEMPLE BETH JACOBS CHURCH, Oakland, California, designed by Albert Hunter, *Architect*. The wedge shaped roof offers beauty and simplicity.

raise the roof to excessive height, yet the arches spanned the entire nave of the church without obstructing parts.

An equally modest, yet striking church structure is the Temple Baptist Church of Colorado Springs (see page 12 top) which came from the creative mind of the same architect. In this church, Weber has used the simplest of designs, the inverted pie or wedge, with marked effect. Both churches were built for a cost of $10 per square foot, with some volunteer help. Glulaminated beams were selected, Weber points out, for their prefabricated qualities and ease of erection. Also, the heavy timber decking provided equal fire rating.

In both buildings the basic and direct structural system was more readily understood than the more conventional joist or purlin. Another point, Weber mentions, is that the size of the structural members of laminated Douglas fir beams for any given use seem to be more in harmony with the human scale than most other materials. The graceful appearance of these beams and the warm natural wood tones, Weber says, make them a most suitable and acceptable material for church work.

Among the more distinctive churches built during the past decade or so in the northwest corner of the country, those designed by Edmundson and Kochen-

MAGNOLIA LUTHERAN CHURCH, Seattle, Washington, by Architects Jones and Bindon, presents a subtle blending of strength and beauty of wood arches and wood ceiling.

doerfer, Portland architects, always attract special attention. One of the most interesting and unusual churches to come from the drafting tables of this firm is the First Covenant Church of Portland (see page 12 center and lower). There is a distinct Scandinavian feeling in the design and over-all effect of this house of worship. The architects used native woods in delicate combination with entire walls of glass to create a striking yet subtly effective church.

The entire narthex wall is glass, and glass has been used with telling effect along both curtain walls, the windows set in deep mullions. Laminated fir arches form the basic structural members of this building, supporting a roof of hemlock two-by-fours laminated with the facing edge sacrified for acoustical properties.

There is an interesting use of an acoustical barrier between narthex and nave to deaden sounds from the narthex, yet those in the vestibule can plainly hear what is going on in the sanctuary. Another feature is a large overhanging porch roof, really an extension of the roof line of the main church structure. Architect Donald Edmundson said the porch was provided to shelter the parishioners from the sun since the church faces south, and from the winter rains.

One of the outstanding churches in the Oregon country is St. Paul's Episcopal Church of Salem, designed by James L. Payne, Salem architect (see page 19 top). This structure combines the vaulted form of the classical church with many modern features. An extra heavy Tudor-type laminated fir arch is used interestingly to mark the break between the chancel and the nave. The base of the arches along the nave are free standing, forming an aisleway along the outer area of the nave. Actually, the oversize arch has been furred out for effect. The arches and purlins of fir have been stained to contrast with the kerfed two-by-six fir decking which has been finished in natural wood, as has the oversize arch section separating the nave and chancel.

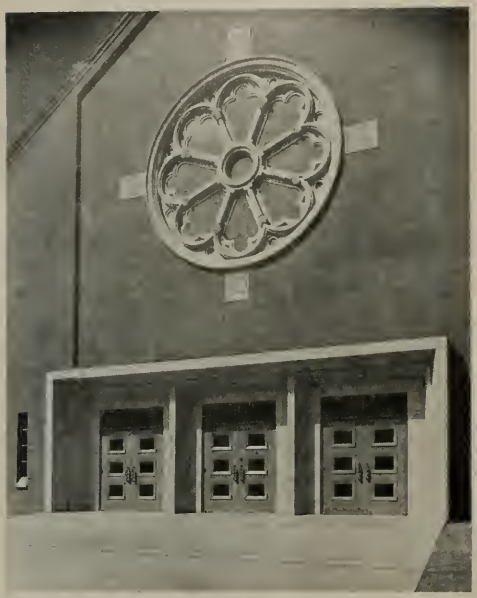
Along both sides of the nave, Architect Payne has made an effective clerestory of stained glass windows. These give a diffused light which is pleasing and restful. Back of the chancel, boards and battens of fir are used for accoustical effect and added character and texture.

The Holy Cross Lutheran Church of Wichita, Kansas, is a striking example of the adaptation of modern materials to the church form (see page 10). Designed by Architect Uel C. Ramey and associates of Wichita, this remarkable structure utilizes the parabolic arch with outstanding results.

There is no sacrifice of beauty within . . . nor lack of lighting.

ADVENT EVANGELICAL LUTHERAN CHURCH, Westminster, Colorado, designed by Orrie Joel Holman and Associates, Architects. A church of charm indeed.

"We feel," says Architect Ramey, "that the parabolic form as used in this building represents a new concept in church design. The parabolic form seems to be especially adaptable to church architecture and its use elsewhere is definitely limited. The graceful curve of the arch together with the feeling of height it induces, are inherent and desirable qualities. We have woven into the building a feeling of spaciousness through the use of the parabolic arch, the open aisles, and the large expanse of glass on the west side, that is so necessary to a successful church design, yet so difficult to achieve on a limited budget."



Window wheel forms a dramatic wall at church entrance.

Simplicity and ease of erection with the laminated fir arches was cited by the architects as desirable features, and the use of three-by-six inch tongue-and-groove planks to form both the roof deck and the finished ceiling were economy factors.

Sacred Heart Church of Tacoma, Washington (see page 16) is again an example of the skillful intertwining of the old with the new. Architects McQuire and Muri have kept to the simple form yet have developed a surprisingly attractive and efficient structure. Especially striking is the entrance way which is dominated by a wheel window above the spacious triple doors. This interesting wheel window is in sharp contrast to the soft brick of the exterior. Stained laminated fir arches in the Tudor styling offer an interesting pattern for the vaulted nave and chancel. Fir six-by-eight purlins were stained to match the arches forming an interesting contrast with lighter colored acoustical board ceilings. Architects McQuire and Muri have also furred out the arch which separates nave and chancel to form a definite demarcation between the two areas.

At White Salmon, Washington, the Bethel Congregational Church is one of the most unique structures of its kind, having some of the features of a church, but designed by Architect John W. Foster of Portland to conform to the hillside site (see page 18). Blessed with a breathtaking view of Mt. Hood, the architect designed the church so the audience could have this inspiring view while at church serv-

SACRED HEART CHURCH, Tacoma, Washington, designed by McGuire and Muri, Architects. Contrasting use of colors and materials in interior, plus lighting combines for enjoyment.

ices. The back chancel wall is full solex glass which forms a perfect picture frame for the mountain. Probably the most interesting feature of this design is the floor plan. The nave widens from back to front, so each successive laminated Tudor arch spans a wider area from rear to chancel. Classrooms have been built in the lower level. The roof line is striking, coming to a wing tip point as the roof projects over the glass wall of the chancel. A balcony surrounds the leading edge of the pointed structure and is reached directly from the chancel.

Undoubtedly a good many modern churches of unusual design have been influenced by the background and interests of the particular membership. A case in point is St. Elizabeth's Episcopal Church of Burien, Washington, a suburban area of Seattle. (See page 17).

Due to the nature of the community which is populated by aircraft engineers and mechanics, the design is free in its form, based on the use of simple parabolic laminated fir arches. Architects Durham, Anderson and Freed of Seattle have been recognized for the remarkably effective churches they have designed in recent years, but certainly St. Elizabeth's must be rated as one of their outstanding designs.

The parabolic arches actually are the structure. They govern its form both within and without. This parish church for 280 people is a rhythm in wood. The arches and four-by-six fir planking have all been left exposed, the planking being laid directly on the arches. The roof is built of hand split cedar shakes. The exterior finish includes generous amounts of rough sawn channel cedar siding.

Interesting use of native woods.

A distinctive feature of the structure is a clerestory section in the offset where a section of the parabolic roof is reduced. Architect Robert L. Durham calls this unusual hiatus in the roof a clerestory detail. The parabolic arches are so arranged that a strip of plastic will let a flood of light into the chancel area without being

ST. ELIZABETH'S EPISCOPAL CHURCH, Burien, Washington, designed by Durham, Anderson and Freed, Architects, designed to keep pace with aircraft minded parishioners.

BETHEL CONGREGATIONAL CHURCH

White Salmon, Washington

John W. Faster, *Architect*

Wedge shaped nave (left) narrows at rear and widens towards chancel: the glass window behind chancel frames a view of Mt. Hood—view at bottom shows sharp pointed roof section and dramatic view windows.

seen from the nave. Side panels of the nave are splayed to provide thin strips of glass which cannot be seen by one facing the altar. The beautiful organ screen has been designed and built of two-by-three inch fir strips.

Another handsome church in the Seattle area is the St. Andrews - by - the - Lake Episcopal Church designed by Architects Young, Richardson, Carleton and Detlie (see page 20). The main church is an inverted pie or wedge with the roof section forming as well the structural supports for the curtain walls. The laminated beams are exposed, and rest on piers of native stone. The roof decking is designed in four-by-six inch spruce, both for its acoustical properties and for its lighter hue. Both beams and ceiling have been left exposed and finished in natural color to capture the beauty of the texture and grain and color of these woods.

The organ screen has been effectively created from vertical boards of elm wood. Native stone has been used for the walls which reach up to the lower edge of the roof line and, above this handsome stone exte-

rior, is a wall of glass above the narthex. The simplicity of design of St. Andrews and its unusual low-setting roof section mark it immediately as a structure of extraordinary interest. A free standing tower, slightly away from the main church structure, and yet to be completed, will also be built of native stone and will give the illusion of height to the entire grouping of structures.

A rather distinctive church structure which departs entirely from the classical form and which embodies some unique design ideas is the Divine Redeemer Church School, Colorado Springs, a product of the fine architectural firm of Toll and Milan (see page 13). This building is currently being used for the congregation of 700, but ultimately it is intended for use as a church school gymnasium.

The structure is flat roofed to conform to the adjoining classroom wing. Sturdy laminated fir beams were used to support a roof of Robertson's deep metal decking to avoid the use of joists and bracing. The combination of the wood and ceiling of metal formed a decorative pattern. The entire building was built with a minimum of expense.

The exterior of this church school with its delicate blending of brick, glass and wood trim mark it as an attractive and inviting building.

The Temple Beth Jacob of Oakland, California, designed by Architect Albert Hunter of Berkeley (see page 14 top), utilizes the increasingly popular wedge

ST. PAUL'S EPISCOPAL CHURCH, Salem, Oregon. Designed by James L. Payne, *Architect.*

SEVENTH DAY ADVENTIST CHURCH, Ft. Collins, Colorado, designed by architect E. Floyd Redding in cooperation with Don Goff. Stone panel back of chancel adds distinctive touch.

shaped form for the main building. Built of laminated fir beams, set directly in concrete and covered with double tongue-and-groove fir timber decking, the church combines beauty and economy. A deep, furred up beam extension is used to divide chancel and nave. By this architectural device, the chancel becomes a definite and distinct entity in itself, yet is patently still a part of the main church hall. Indirect lights have been set in the decking and some light comes in from windows along the curtain wall.

Apparently for economy's sake and to utilize the structural latitude of the shop-grown laminated beams, the wedge shaped main church structure is growing in popularity. Typical of the churches designed in this styling is the Advent Evangelical Lutheran Church of Westminster, Colorado, (see page 15) created by Orrie Joel Holmen and Associates, architects of Wheat Ridge, Colorado.

It was the distinct feeling of this group of parishioners, Architect Holmen says, that they desired a very high pitched roof practically approaching a 12/16 pitch. Our initial designs were in A-frame design, but due to the added cost in the foundation work, and the

(See Page 27)

ST. ANDREWS-by-the-lake EPISCOPAL CHURCH, Seattle, Washington, designed by Young, Richardson, Carleton and Detlie, Architects. Details of chancel (top view); simplified roof section construction (center) and clean lines of wedge roof shown below.

HALL OF JUSTICE
AND RECORDS BUILDING

County of San Mateo

REDWOOD CITY, CALIFORNIA

MICHAEL GOODMAN
Architect

Engineering Consultants

HALL, PREGNOFF & MATHEU
Structural

CLYDE E. BENTLEY
Mechanical & Electrical

DAMES & MOORE
Soil Testing

Work was commenced by the architect in 1952. For better orientation in programming the needs of the fast growing County, the Architect collaborated closely with the County Manager's office and other departments of the County government in preparing an economic survey for presentation to the Board of Supervisors. The survey presented two alternates:

(1) Evaluation of the existing buildings on the old courthouse site, and of how those facilities would be utilized in connection with the County's judicial system and operating needs.

(2) Evaluation of the facilities to be provided by a new building on a new site to house both judicial offices and other County departments functionally related to the judicial;

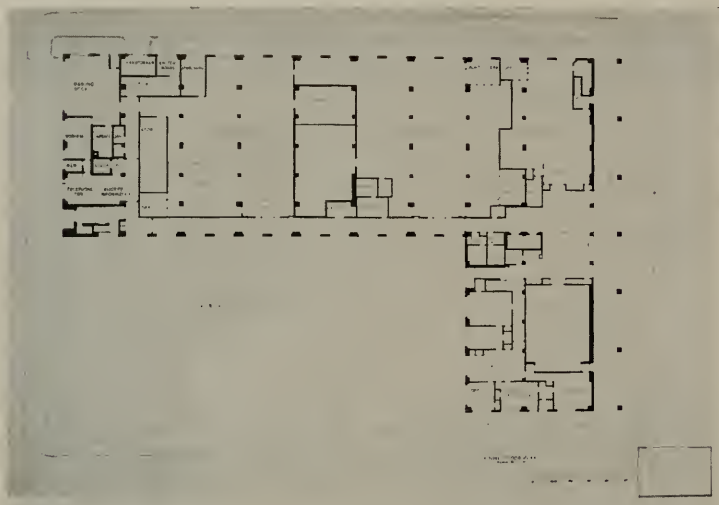
Determination of the approximate size and shape of a new building, together with an approximate cost estimate, which would best serve present County requirements and also allow for future expansion in anticipation of County needs in the next ten years.

After the second alternative was adopted, the Architect investigated the operating arrangements and requirements of existing courtrooms and offices in several cities in view of the scarcity of information on courthouse planning except for the traditional type.

SITE AND STRUCTURE:

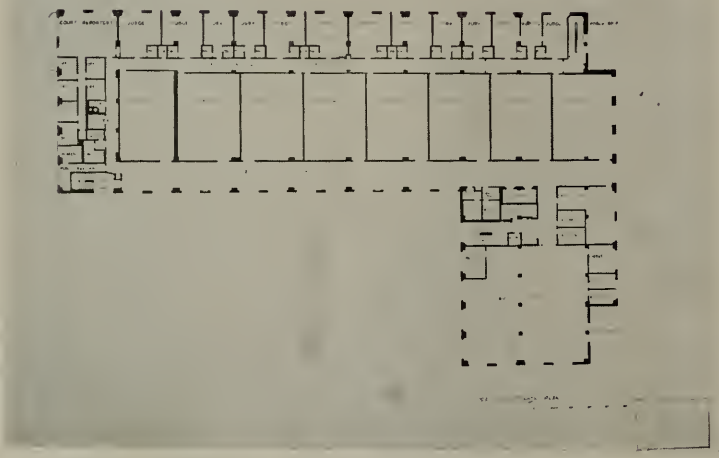
After three months of study, it was determined that a new building be located on the old California Square block in Redwood City, once part of the great Rancho de las Pulgas, an original Mexican Governor's Grant.

It was decided that the new building be designed in an "L" shape, allowing for off-street parking of 65 cars and for future expansion. The structure was to consist of four stories with two penthouses and sun deck on the fourth floor; the first three stories to serve present needs and the fourth story shell to house the future Jail, which is now in working drawing stage. Eight courtrooms, each with a Judge's Chamber, are provided, of which six are now in use.



GROUND FLOOR PLAN

Parking Area at left.



SECOND FLOOR PLAN

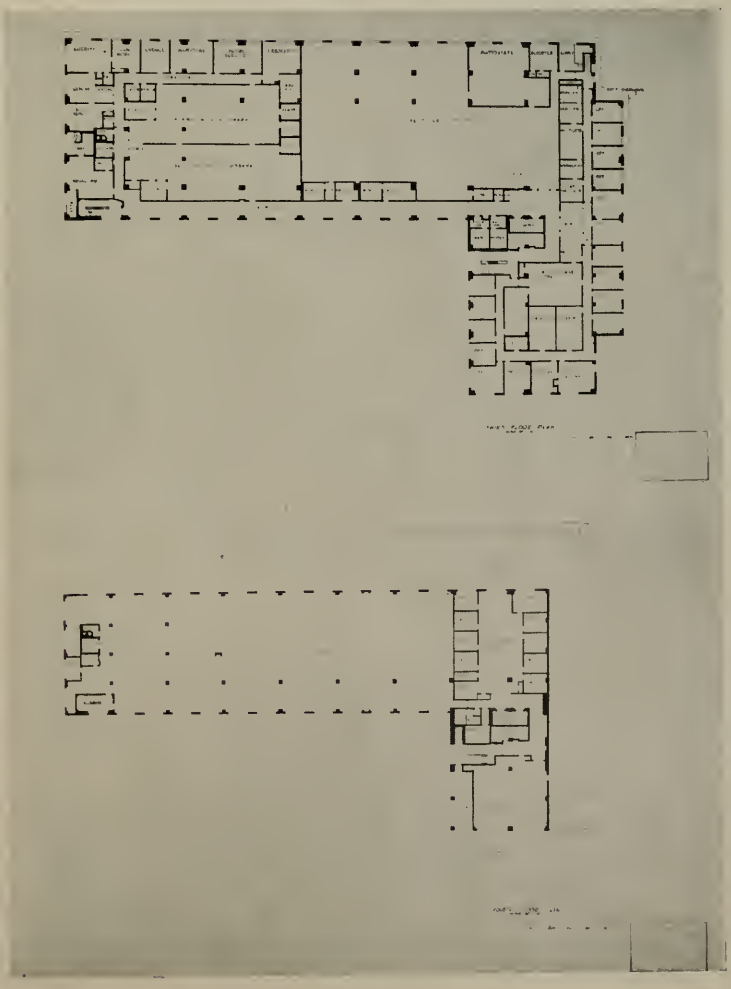
Court Rooms and offices.

The Master Plan prepared by the Architect and consultants provides for future expansion of the building to fill in the "L", making a rectangular shape of 200 x 300 feet which will cover the entire block and provide approximately 88,000 square feet of additional area including new machine room penthouses and public circulation. The expansion, for which foundations have been calculated as well as mechanical attachments, will be readily achieved by removing sections of the exterior walls. The windows in those walls are designed to be detachable and will be reinstalled on the exterior walls of the expansion.

STEEL in place for concrete pouring.

THIRD FLOOR PLAN

Law enforcement offices.



FOURTH FLOOR PLAN

Jail and Probation Dept.

REDWOOD CITY — HALL OF JUSTICE . . .

Typical Court Room

Royal Showcase and Fixture Co. Photo

BUILDING FACILITIES:

The interior plan arrangement is simple and economical, consisting of a main lobby and public corridors leading to the various judicial and administrative departments. These are located as follows:

First Floor. Board of Supervisors' Chambers; County Manager; Director of Building Construction & Maintenance; County Clerk; Municipal Court Clerk; Election Registration; Sheriff's Sergeant and Radio-Telephone Dispatcher.

Second Floor. Superior Courts; Municipal Courts; Court Reporters' Room; Press Room.

Third Floor. District Attorney; County Recorder; Sheriff.

Fourth Floor. Adult Probation; Future Jail.

There are three elevators, one of which will be used for the future Jail.

JAIL:

Provision for the future Jail has been made to house 115 male and 12 female inmates, plus facilities for holding approximately ten persons overnight. A distinctive feature of the building plan is the provision for conducting prisoners from the Jail to the Courts unobserved by the public. The plan also provides for

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For the new Hall of Justice Building in Redwood City

By

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separation of jury members from any contact with the public. The Jail elevator has been specially designed for this building, and is adaptable for public as well as prisoner use.

MECHANICAL SYSTEMS:

The electrical system has a complete underfloor distribution for telephone and power. There is an electronic clock system, and in general, slimline fluorescent lighting.

The heating system in general consists of hot water convectors located under the windows on the periphery of the building. All interior areas are ventilated, and there are separate systems for certain designated areas. The air systems have been arranged so that future cooling may be added as desired. The mechanical systems are designed to serve the future expansion.

It was advisable to locate the Machine Rooms on the roof in penthouses because soil conditions prevented use of the basement, and space saving requirements precluded other areas.

ARCHITECTURAL FIRM EXPANDS: The Architectural-Engineering firm of Ernest F. Winkler, AIA, San Francisco, has announced the addition of W. Harold Farquar to the staff as an Educational Consultant in the field of school plant construction.

LONG BEACH NAVAL SHIPYARD CONTRACTS

The American Society of Civil Engineers, Los Angeles Section, has been given authority to negotiate certain A&E and Engineering Services contracts for professional services on work to be accomplished at the Long Beach Naval Shipyard.

The selection of a firm for a contract award is based upon the qualifications, capacity, and interest of the applying firm to do the desired work on a specific project at the yard. Anyone interested should contact the ASCE for full information.

CALIFORNIA DIVISION OF ARCHITECTURE FEE SCHEDULE

The California Division of Architecture, Department of Public Works, Sacramento, has recently issued a comprehensive Schoolhouse Circular No. 5, which explains in some detail the schedule of fees, as required

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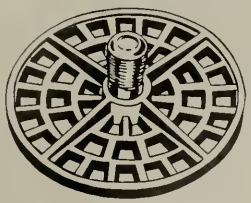

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by state law, in connection with the checking of plans and the supervision of construction of public school buildings in California.

The former rigid fee schedule has been amended to permit adjustment of fees by the Division of Architecture within certain prescribed limits.

IMPROVING ENGINEER CONFERENCE THEME

Th Ninth Annual College-Industry Conference sponsored each year by the Relations-with-industry Division of the American Society for Engineering Education, will be held next January 30-31 at the University of California, Los Angeles, under auspices of the University Extension and the College of Engineering.

The conference, held on the West Coast for the first time, will have as its theme, "Improvement of the Engineer—A Dual Responsibility of Industry and the Engineering School." Emphasis throughout the two-day conference will be on improvement of the engineer rather than on the training of more engineers, according to J. M. English, conference chairman.

ARCHITECT DEVISES NEW BUILDING TECHNIQUE

A revolutionary new building technique that promises to reduce framing costs on new houses by as much as 30%, was recently announced by William Krisel, Architect, partner of Palmer and Krisel, AIA, Los

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Angeles, at a housing conference in Washington, D. C., sponsored by the National Association of Home Builders.

Krisel revealed that his firm is already designing houses for which entire walls, including doors and windows, are manufactured to the architects's specifications locally and assembled on the site.

Factory-built wall sections were a natural progression of the technique, already in extensive use in Southern California, by which wall panels of new homes are built in jigs on the site and then moved into place on the lot.

WESTERN CHURCHES

(From Page 20)

inadaptability of attaching a wing to this type of structure, the 3-hinged arch, putting the haunch on the exterior, was designed as a simple method of retaining the roof lines and providing economy.

The cost of this complete structure, including architect's fees, all furnishings including pews, pulpit, lecturn, chancel rail, altar and chancel screen was $38,400, and the area of the building is 3,680 square feet.

Use of a glass wall at the narthex in the triangle area above where the beams join with the curtain wall is interesting.

Power and dignity combine with the vaulted arch to create of the Magnolia Lutheran Church of Seattle (see page 14 lower), a building of rare charm. Designed by Architects Jones and Bindon, the church suggests an upsweeping force. Some of this certainly is attained through the design of the roof members themselves. The powerful shoulders of the laminated arches contain the subtle inference of great strength. Yet, this is softened to a degree by the texture combined in the wood, glass and brick which is in evidence to the audience. While the entire roof section of exposed fir arches, purlins and ceiling is massive to cover the forty foot span of the sanctuary, the imaginative use of a light stain gives the illusion of lifting the roof and vaulted ceilings even higher than they are. There is no feeling of weight from above, but rather, of a protective cover.

Effective use of native materials resulted in a rather lovely Seventh Day Adventist Church in Fort Collins, Colorado (see page 19 lower). Laminated Tudor arches were used by Architect E. Floyd Redding of Lakewood, Colorado, to attain a delicately vaulted ceiling. A distinctive feature of this church is the use of a panel of native stone in back of the chancel, reaching from floor to the tip of the church ceiling. Indirect lighting is directed on the panel, and the beautiful color and texture of the stone add an unusual note to the church and become a focal point of attention behind the pastor.

Each year brings new variations in design to the basic church structure here in the West, as imaginative architects put their talents to work to create contemporary structures of outstanding beauty and charm. Delightful new forms have been used without in any way detracting from the basic concept of a house of worship. Also observed with gratification, is the most interesting manner in which western architects are combining the historical classic stylings with our more modern approach to ecesiastical architecture. The effect is to produce entirely new forms of church structure, which revolve around certain long-accepted fundamentals, yet take diverting and enticing side journeys into exciting, new dimensions.

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CENTRAL ARIZONA: James W. Elmore, President; Martin Ray Young, Jr., Vice-President; Robert T. Cox, Secretary; David Sholder, Treasurer; Ex. Com. Elmore, Cox, Fred Weaver, Richard E. Drover & Ralph Haver. Office of Secy. 1902 E. Camelback Rd., Phoenix.

SOUTHERN ARIZONA: Fred Jobusch, President; Sanury C. Fuller, Vice-President; Edward H. Nelson, Secretary; Gerald I. Cain, Treasurer; and Jobusch, Nelson, E. D. Herreras, Ellsworth Ellwood, and Emerson C. Scholer, Exec. Comm. Office of Secy. 234 E. 6th St., Tucson.

Coast Valleys Chapter:

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Central Valley of California:

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Idaho Chapter:

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Monterey Bay Chapter:

Wallace J. Holm, President; Thomas S. Elston, Jr., Vice-President; Frederick C. McNulty, Sec.; George F. Rhoda, Treas. Office of Secretary-Treasurer, 2281 Prescott Street, Monterey.

Montana Chapter:

William J. Hess, President (Great Falls); John E. Toohey, Vice-President (Billings); H. C. Cheever, Sec.-Treas. (Bozeman). Directors: Oscar J. Ballas, Wm. J. Hess, John E. Toohey. Office of Secy., Bozeman, Montana.

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RENO: Edward S. Parsons, President; Laurence A. Gulling, Vice-President; George L. F. O'Brien, Secretary; Ralph A. Casazza, Treasurer. Directors, John Crider, M. DeWitt Grow, Raymond Hellmann. Office Secy., 160 Chestnut St., Reno, Nev.

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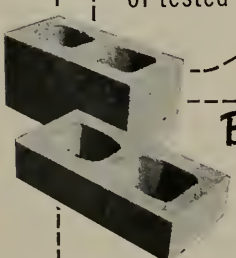

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PASADENA CHAPTER

The regular December meeting was a joint conference between the Pasadena Architectural Club and the Pasadena Chapter of the AIA, and was devoted to a general consideration of the architectural profession.

NORTHERN CALIFORNIA CHAPTER

December 7th saw the annual Christmas Party in full swing with the Women's Architectural League and the Northern California Chapter co-hosting the event with some fifty newly licensed architects and their wives attending as guests. The event was held in the California School of Fine Arts, San Francisco.

CALIFORNIA COUNCIL OF ARCHITECTS

Indications are that the effort in connection with Proposition 10 on the recent general election ballot has focused public attention on California State agency encroachment in the architectural profession and private industry in general. Present plans call for reorganization and formation of a permanent liaison committee of Architects and Engineers to be called the Architects-Engineers Conference Committee. The new group will serve to formulate strategy and exchange information on matters of mutual interest.

WASHINGTON STATE CHAPTER

The annual Christmas Party was held December 7th at the Floating Bridge Inn, Mercer Island, with a

Directors: David Vhay, Edward S. Parsons, M. DeWitt Grow, John Crider, Lawrence Gulling. Office of President, 131 W. 2nd St., Reno.

LAS VEGAS: Walter F. Zick, President; Aloysius McDonald, Vice-President; Edward B. Hendricks, Sec.-Treas.; Directors: Walter F. Zick, Edward Hendricks, Charles E. Cox. Office of Secy., 106 S. Main St., Las Vegas.

Nevada State Board of Architects:
L. A. Ferris, Chairman; Aloysius McDonald, Sec.-Treas. Members: Russell Mills (Reno), Edward S. Parsons (Reno), Richard R. Stadelman (Las Vegas). Office 1420 S. 5th St., Las Vegas.

Northern California Chapter:
Wm. Stephen Allen, President; William Corlett, Vice-President; Worley K. Wong, Secretary; Donald Powers Smith, Treasurer; Robert S. Kitchen, Bernard Sabaroff, Corwin Booth and A. Appleton, Directors. Exec. Secty. May B. Hipshman. Chapter Office, 47 Kearny St., San Francisco.

Orange County Chapter:
George J. Lind, President; John A. Nordbak, Vice-President; William T. Jordan, Secretary; Marvin W. Renfro, Treasurer. Directors—Everett E. Parks, William E. Blurock, Raymond W. Johnson, Office of Sec., 1606 Bush, Santa Ana, California.

Oregon Chapter:
Donald W. Edmundson, President; Walter L. Gordon, Vice-President; Earl P. Newberry, Secretary; Charles Gilman Davis, Treasurer. Directors: Donald J. Stewart. Office of Secy., 619 Builders Exchange Bldg., Portland.

Pasadena Chapter:
William H. Taylor, President; Lee B. Kline, Vice-President; H. Douglas Byles, Secretary; Lyman F. Ennis, Treasurer. Directors: Henry C. Burge, Keith P. Marston, Ernest C. Wilson and Harold B. Zook. Office of Secty., 622 S. Lake Ave., Pasadena.

San Diego Chapter:
Frank L. Hope, President; Sim Bruce Richards, Vice-President; Raymond Lee Eggers, Secretary; Fred M. Chilcott, Treas. Office of Secty. 4730 Palm St., La Mesa.

San Joaquin Chapter:
Philip S. Buckingham (Fresno), President; Allen Y. Lew (Fresno), Vice-President; James J. Nargis (Fresno), Secretary); Paul C. Shattuck (Merced), Treasurer. Directors: William C. Hyberg, David H. Horn, Alastair Simpson. Office of Secty., 627 Rowell Bldg., Fresno 21.

Santa Barbara Chapter:
Glen G. Mosher, President; Lewis Storrs, Vice-President; Darwin Ed. Fisher, Secretary; Wallace W. Arendt, Treasurer. Directors: Robert I. Hoyt and Roy Wilson. Office of Secty., 20 S. Ash St., Ventura.

Southern California Chapter:
Paul Robinson Hunter, President; Stanley R. Gould, Vice-President; Aleck Murrey, Sec.; Graham Latta, Treas.; Directors, Stewart S. Granger, George Vernon Russell, Cornelius M. Deasy, William Glenn Balch. Exec.-Secy., Miss Rita E. Miller, 3723 Wilshire Blvd., Los Angeles 5.

Southwest Washington Chapter:
Gilbert M. Wojahn, President; Gordon N. Johnston, 1st Vice-President; Robert T. Olson, 2nd Vice-President; Henry Kruize, Jr., Secretary; L. Dana Anderson, Treasurer; Robert B. Price and Nelson J. Morrison, Trustees. Office of the Secy., 2907 A St., Tacoma 2, Washington.

Utah Chapter:
W. J. Monroe, Jr., President, 433 Atlas Bldg., Salt Lake City; M. E. Harris, Jr., Secretary, 703 Newhouse Bldg., Salt Lake City.

Washington State Chapter:
Lloyd J. Lovegren, President; James J. Chiarelli, 1st Vice-President; Harold W. Hall, 2nd Vice-President; John L. Rogers, Secretary Albert Bumgardner, Treasurer. J. Emil Anderson, Robert H. Dietz, Robert L. Durham, and Carl F. Gould Directors. Miss Dayis Holcomb, Exec-Secy, Offices 409 Central Bldg, Seattle 4, Washington.

Spokane Chapter:
Wm. C. James, President; Carl H. Johnson, Vice-President; Keith T. Boyington, Secretary; Ralph J. Bishop, Treasurer; Lawrence G. Evanoff, Carroll Martell, Kenneth W. Brooks, Directors. Office of the Secy., 615 Realty Bldg., Spokane, Washington

Hawaii Chapter:
Robert M. Law, President; Harry W. Seckel, Vice-President: Richard Dennis, Secretary. Directors: Edwin Bauer, George J. Wimberly. Office of Secy., P.O. Box 3288, Honolulu, Hawaii.

CALIFORNIA COUNCIL OF ARCHITECTS:
John Lyon Reid, President (San Francisco); William G. Balch, Vice-President (Los Angeles); Lee B. Kline, Secretary (Pasadena); Albert B. Thomas, Treasurer (Sacramento); Miss Rhoda Monks, Office Secretary. Office of Secty., 26 O'Farrell St., San Francisco.

CALIFORNIA STATE BD. ARCHITECTURAL EXAMINERS:
George P. Simonds (Oakland), President; Ulysses Floyd Rible (Los Angeles), Secretary; Earl T. Heitschmidt (Los Angeles); C. J. Paderewski (San Diego); Norman K. Blanchard (San Francisco). Exec. Secy., Robert K. Kelley, Room 712, 145 S. Spring St., Los Anbeles; San Francisco Office, Room 300, 507 Polk St.

ALLIED ARCHITECTURAL ORGANIZATIONS

San Francisco Architectural Club:
Frank L. Barsotti, President; Arie Dykhuizen, Vice-President; Albert Beber-Vanzo, Secty; Stanley Howatt, Treasurer. Club offices 507 Howard St., San Francisco.

Producers' Council—Southern California Chapter:
J. Morris Hales, Ceco Steel Products Corpn, President; H. C. Galitz, Westinghouse Electric Corpn, Elevator Division, Vice-President; Owen L. McComas, Arcadia Metal Products, Secretary; LeRoy Frandsen, Detroit Steel Products, Pencatra Building Panel Division, Treasurer.

Producers' Council — Northern California Chapter (See Special Page)

Construction Specifications Institute—Los Angeles:
D. Stewart Kerr, AIA, President; R. R. Coghlan, Jr., Vice-President; W. F. Norton, Secretary; Malcolm Lowe, Treasurer. E. Phil Filsinger, Liaison Officer, Producers' Council, Gladding, McBean & Company.

good turn-out of members who enjoyed a luscious smorgasbord, blazing hearth and decor by the Guild.

SAN DIEGO CHAPTER

Arthur D. Decker, new Corporate Member, has opened offices at 320 N. Magnolia in El Cajon. He was formerly employed by Kistner, Wright and Wright of Los Angeles.

Richard George Wheeler, AIA, and Associates, Architects and Engineers, moved recently into new and larger quarters in a building designed by the firm at 3276 Rosecrans St.

Robert J. Platt and Arthur Matsuura have opened architectural offices at 1870 Rosecrans Street, where they will engage in the general practice of architecture.

OREGON CHAPTER

Consideration is being given the establishment of an Executive Secretary's office to handle the rapidly growing details of Chapter activities. Reports of ways and means of accomplishing this are under consideration and will be reported at an early meeting.

CENTRAL ARIZONA CHAPTER

Julius Shulman, photographer, gave an interesting program recently when he discussed the techniques of architectural photography and demonstrated his remarks with a number of slides showing various ways of obtaining the greatest "visual" value in photography of architectural subjects.

The December meeting was devoted to a Dinner Dance and installation of officers for the ensuing year.

SANTA CLARA & SANTA CRUZ COUNTIES CHAPTER

The December meeting was held at Zanze's on the 7th and represented the annual Christmas Party and a joint meeting of the Chapter and Women's Architectural League. Adoption of a new budget for next year assures adequate funds for a "busy year ahead."

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WITH THE ENGINEERS

Structural Engineers Association of California

C. M. Herd, President; William T. Wright, Vice-President; J. F. Meehan, Secy.-Treas.; Directors Wesley T. Hayes, Michael V. Pregnoff, Howard A. Schirmer and James L. Stratta (North); Henry M. Layne, J. C. Middleton, Harold Omsted, and William T. Wright (South); and C. M. Herd and J. F. Meehan (Central). Office of the Secy., 140 Geary St., San Francisco.

Structural Engineers Association of Northern California

Walter L. Dickey, President; Henry J. Degenkolb, Vice-President; Samuel H. Clark, Secretary; William K. Cloud, Treasurer; and Cecil H. Wells, Jr., Asst. Secy. DIRECTORS, William W. Brewer, Chas. D. De Maria, Clarence E. Rinne, Howard A. Schirmer, and James L. Stratta. Office of Secy., 411 Market St., San Francisco.

Structural Engineers Association of Central California

C. M. Herd, President (Sacramento); L. F. Greene, Vice-President (Sacramento); J. F. Meehan, Secy.-Treas. Directors: C. M. Herd, L. F. Greene, L. G. Amundsen, W. A. Buehler, R. W. Hutchinson. Office of Secy., 68 Aiken Way, Sacramento.

American Society of Civil Engineers
Los Angeles Section

George E. Brandow, President; Ernest Maag, Vice-President; L. LeRoy Crandall, Vice-President; J. E. McKee, Secretary; Alfred E. Waters, Treasurer. Office of Secy., California Institute of Technology, Pasadena, Calif.

Sec.y-Treas.; 4865 Park Ave., Riverside. Ventura-Santa

STRUCTURAL ENGINEERS ASSOCIATION NORTHERN CALIFORNIA

The December meeting was the Annual Business meeting, plus the added attraction of a color and sound movie of the Richmond-San Rafael Bridge covering all aspects of construction. The film, in great demand for eastern showing, is a comprehensive and fine documentary record of the latest great Bay Area bridge project.

Recent new members include: Richard G. Castle, Affiliate.

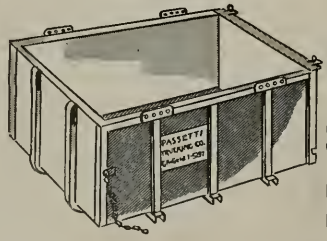
SF FEMINEERS CHRISTMAS PARTY

The Femineers held a Champagne & Chapeaux luncheon party on December 19th at the Lakeside-Olympic Country Club.

Members and guests displayed their original Christmas Chapeaux, in many and varied designs, and were judged on the basis of "Best of Show", the "Most Amusing", and the "Most Original and Beautiful."

Mrs. Edward Fulkerson, San Francisco, and Mrs. Burr Randolph of Fairfax, served as Co-Chairmen of the Program Committee. Mrs. Parker Robinson served as Chairman of the Decorating Committee, assisted by Mrs. John Fies of San Carlos, Mrs. Thomas Lynch, Menlo Park, and Mrs. Michael Pregnoff of San Francisco.

Recent new members of the Femineers include: Mrs. O. E. Merwin of San Francisco, and Mrs. Richard Erlin of Napa.



AMERICAN SOCIETY OF CIVIL ENGINEERS—SF SECTION

The Annual Professional Engineers Dinner Dance was observed on December 15 at the Fort Mason Officers Club. Members and wives representing the Golden Gate, East Bay, and Peninsula Chapters of the California Society of Professional Engineers attended.

The five-man member Section Committee on Rapid Transit under the chairmanship of George W. Whittle, presented their report at the December 18th meeting. The report represented a study of six months of various proposals submitted by the SF Bay Area Rapid Transit Commission, by Parsons, Brinckerhoff, Hall and MacDonald, and by the Stanford Research Institute.

ENGINEERS' WEEK—1957

Clyde E. Bentley, Consulting Engineer, San Francisco, has been selected General Chairman of the Bay Area Engineers' Week Committee for 1957, by a nominating committee appointed by the San Francisco Engineering Council.

Sub-committees to be named by Bentley will include Finance, Contacts and Speakers, Newspapers and Magazines, T-V and Radio, Honor Awards, and Display.

AMERICAN CHEMICAL SOCIETY

The American Chemical Society, California Section, the Golden Gate Paint and Varnish Production Club, and the American Society for Testing Materials, Northern California District, held a joint meeting early this month in Lewis Hall, University of California, Berkeley, to hear Dr. Charles E. Reed discuss "The Industrial Chemistry, Properties and Applica-

Barbara Counties Branch, Robert L. Ryum, Pres.; Richard E. Burnett, Vice-President; George Conahey, Secy.-Treas., 649 Doris St., Oxnard.

American Society of Civil Engineers
San Francisco Section

R. D. Dewell, President; H. Christopher Medbery, 1st Vice-President; William W. Moore, 2nd Vice-President; Bernard A. Vallerga, Treasurer; Robert M. Kennedy, Secretary. Office of Secty. 604 Mission St., San Francisco.

San Jose Branch

Stanley J. Kocal, President; Charles L. Coburn, Vice-President; Myron M. Jacobs, Secty. and Treas.

Structural Engineers Association of
Southern California

William T. Wheeler, President; R. W. Binder, Vice-President; Albin W. Johnson, Secy.-Treas.; Directors Roy G. Johnson, David M. Wilson, Harold L. Manley and Cydnor M. Biddison. Office of Secy., 121 So. Alvarado St., Los Angeles 57.

Structural Engineers Association
of Oregon

Sully A. Ross, President; Francis E. Honey, Vice-President; Delmar L. McConnell, Secy.-Treas. Directors: Robert M. Bonney, George A. Guins, Francis E. Honey, Evan Kennedy, Delmar L. McConnell. Office of Secy., 717 Board of Trade Bldg., Portland 4, Oregon.

Society of American Military Engineers
Puget Sound Engineering Council (Washington)

R. E. Kister, A. I. E. E., Chairman; E. R. McMillan, A. S. C. E., Vice Chairman; L. B. Cooper, A. S. M. E., Secretary; A. E. Nickerson, I. E. S., Treasurer; Offices, L. B. Cooper, c/o University of Washington, Seattle 5, Washington.

American Society Testing Materials
Northern California District

H. P. Hoopes, Chairman; P. E. McCoy, Vice-Chairman; R. W. Harrington, Secretary, Office of Secy., c/o Clay Brick & Tile Assn, 55 New Montgomery St, San Francisco 5.

Society of American Military
Engineers—San Francisco Post

Col. Wm. F. Cassidy, President; Cmdr. W. J. Valentine, 1st Vice-President; Col. Edwin M. Eads, 2nd Vice-President; Bob Cook, Secretary; C. D. Koerner, Treasurer. Directors Col. J. A. Graf, Capt. A. P. Gardiner, P. W. Kohlhaas, C. G. Austin and C. R. Graff.

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tions of Silicones."

Dr. Reed, general manager of the Silicone Products Department, General Electric Company, explained the basic chemical structure of silicones with particular reference to the similarities and differences compared to other industrial polymers.

AMERICAN SOCIETY OF HEATING AND AIR CONDITIONING ENGINEERS

The December meeting of the Golden Gate Chapter was devoted to the annual "Ladies' Night", dinner and dancing in the Empire Room of the Sir Francis Drake Hotel, San Francisco.

STRUCTURAL ENGINEERS ASSOCIATION OF SOUTHERN CALIFORNIA

"Fundamentals of Space Travel" was the subject of discussion at the December meeting held in the Roger Young Auditorium, Los Angeles.

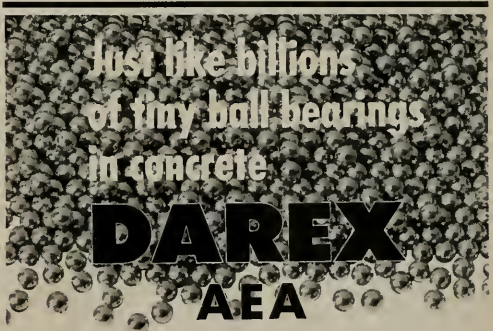
Starting with the basic law of Newton, Dr. Hans R. Friedrich, co-developer of the German V-2 rocket during his assignment as Section Chief at the German Rocketry Center at Peenemuende, covered the fundamentals of celestial mechanics on which future travel through planetary space must be based.

Dr. Friedrich has been associated with the Convair Division of General Dynamics in San Diego since 1951, and is presently Chief Flight Mechanics Engineers, assigned to the study of guided missile problems in the overall field of flight mechanics which include dynamics, control and flight performance.

Recent new members include: Raymond W. Anderson, John A. Erickson, Robert B. Linderman, Ben L. Schmid and Robert A. Williamson, MEMBERS; Thomas L. Drum and Richard J. Phillips, JUNIOR; Hal P. Gadd, AFFILIATE; William A. Lamb, John J. Miles, William S. Scott, William J. Watterson and John Yaguchi, ASSOCIATE.

ENGINEER MOVES OFFICE: Kenneth Brunner has moved his office to 8339 E. 2nd Street, Downey, California.

ENGINEER PARTNERSHIP: H. M. Hansen and C. Devel, structural engineers of Los Angeles, have formed a partnership to be known as H. M. Hansen & C. Devel, Structural Engineers. Offices have been opened at 3806 Beverly Blvd., Los Angeles.



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ARCHITECTS FORM NEW COMPANY

Formation of the architectural and engineering firm of Rack & DeMasirevich, Inc., Los Angeles, has been announced by Robert E. Rack, president of the corporation and George DeMasirevich, architect.

Rack, formerly of Texas and Illinois, has been associated with major public and commercial projects in Texas totaling more than $20,000,000 in building costs, and also served as chief architect and land planning consultant for the Federal Housing Administration.

DeMasirevich was formerly associated with the U. S. Legation in Budapest, Hungary, and was in charge of the master plan for rebuilding war damaged Budapest after World War II.

Offices will be maintained in Los Angeles and Redlands.

ARCHITECTS SELECTED

The architectural firm of Ponsford & Price, 524 20th St., Oakland, has been commissioned by the Oakland Y.M.C.A. to draft plans and specifications for construction of a new Young Men's Christian Association building in East Oakland.

SACRAMENTO SOUTH GATE SHOPPING CENTER PLANS

William David & Associates, 988 Market St., San Francisco, are working on plans and specifications for Joseph Blumenfield, San Francisco, for construction of a $4,500,000 supermarket and group of stores in the South Gate Shopping Center, Franklin at Florin Road, Sacramento.

The 1-story, 450,000 sq. ft. area building will be reinforced concrete tilt-up, structural steel roof trusses, wood roof, air conditioning and automatic sprinkler system.

ARCHITECT SPEAKS ON DOWNTOWN USA

Edgardo Contini, partner in the architectural firm of Victor Gruen & Associates, spoke before the Los Angeles Transportation Club on the subject "The Renewal of Downtown U.S.A.", as part of recent observances in Los Angeles of "Traffic Improvement Week."

CONVENT AT YUBA CITY

Architects Barovetto & Thomas, 718 Alhambra Blvd., Sacramento, are working on drawings for construction of a 1-story concrete block and steel panel Convent building for the Holy Angels Parochial School in Yuba City.

PORTERVILLE HOSPITAL

The architectural firm of Nielsen & Moffatt, 4072 Crenshaw Blvd., Los Angeles, is working on plans and specifications for construction of a 40-bed hospital building for the Sierra View Hospital District of Porterville.

The new facilities will contain 20,000 sq. ft. and will be of reinforced brick, concrete floors, asphalt tile floors, terrazzo, ceramic tile, air conditioning, and will cost an estimated $481,000.

NATATORIUM FOR DOWNEY

The firm of Powers, Daly & DeRosa, Gordon F. Powers, architect, 3667 Atlantic Ave., Long Beach is preparing drawings for construction of a frame and stucco natatorium in Downey Park for the City of Downey, Department of Parks and Recretation.

The project will contain 15,000 sq. ft. of area, steel girder roof, built-up composition roofing, concrete slab and ceramic tile floors, difused plate glass, gunited and reinforced poured concrete pools, dressing rooms and storage facilities, pool heating and filtering equipment.

JUVENILE HALL FOR REDDING

Architect E. Geoffrey Bangs, 428 13th St., Oakland, is preparing plans for construction of a 1-story reinforced concrete and frame Juvenile Hall for the Shasta county Board of Supervisors, to be built in Redding.

Estimated cost of the project is $110,000.

BONDS VOTED FOR PLUMAS HOSPITAL

The Plumas Hospital District of Quincy will construct a new 30-bed Hospital in Quincy, according to an announcement by Hayward Green, president of the district.

The new hospital will be of 1-story, Type 1, reinforced concrete construction. Bonds in an amount of $600,000 have been approved for the project.

CONTRA COSTA COUNTY BRANCH OFFICE BLDG.

Architects Beland & Gianelli, 1903-A Sonoma Ave., Vallejo, are working on plans and specifications for construction of a 20,000 sq. ft., reinforced concrete tilt-up branch County Office building to be built in the new Civic Center in Pittsburg for Contra Costa county.

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ADRIAN WILSON IS SPEAKER

Adrian Wilson, Los Angeles architect, was a speaker at the 33rd anniversary congress of the Building Contractors Association of California, in Los Angeles recently.

His subject was "Southland – Future Development."

REYNOLDS ALUMINUM APPOINTS COMSTOCK

The Comstock Steel Co., Phoenix, Arizona, has been appointed Arizona distributor of Reynolds Aluminum mill products and architectural aluminum, and will stock sheet, plate, bars, channels, tubing, pipe, structural shapes, thresholds, window sills, handrails, and gravel stops.

Howard K. Brown, president of Comstock Steel, announced that Reynolds products will also be available through Comstock's Tuscon branch offices.

ARCHITECT WINS SCHOOL DESIGN COMPETITION

H. E. Beyster & Associates, Detroit architectural and engineering firm, won two of the four awards in the first annual School Design Competition jointly sponsored by the Michigan Association of School Boards and the Michigan Society of Architects, according to an announcement by Sidney Sixma, executive secretary of the Michigan Association of School Boards.

Awards were for design of a proposed high school and for a completed high school.

Thirty-five Michigan architects entered 74 designs in the competition.

NEW APARTMENTS FOR PALO ALTO

Architect Paul W. Porter, Palo Alto, is preparing plans for construction of four new apartments, 6 units each, for the Youritan Const. Co., of Palo Alto.

Two-story, concrete block and frame construction the apartments will be built in the 800 block of University Avenue, Palo Alto.

LOS ANGELES ARCHITECTS DESIGN MARYLAND BLDG.

Architects Neutra & Alexander, 2379 Glendale Blvd., Los Angeles, prepared plans and specifications for construction of new Francis Scott Key Memorial and Laboratory Building, including a lecture hall, music and fine arts area, and planetarium, at St. John's College, Annapolis, Md.

The building will contain 80,000 sq. ft. area. Cochran, Stephenson & Wing, Baltimore, Md., are associate resident architects.

NEW HIGH SCHOOL AND ADDITIONS

The San Rafael High School District will spend more than $2,350,000 in the construction of a new High School and additions to the present High School, according to a recent announcement.

Funds for the construction were made available through a Bond Election.

LOS ANGELES HOME BUILDERS HONORED

The Home Builders Institute, representing an association of large scale home builders in Los Angeles and Orange counties, installed two lifetime members of its Board of Directors and selected thirty others to serve on the Board during the ensuing year, recently.

The new lifetime members are Harrison R. Baker, partner in the Pasadena building firm of Baker-Marlow, and Leonard A. Hardie, an outstanding Southern California real estate developer.

Last year the honor was accorded H. Cedric Roberts and Lloyd S. Whaley.

COMBINATION HOTEL OFFICE AND GARAGE

The architectural firm of Hertzka & Knowles, 85 Post St., San Francisco, is working on drawings for construction of a combination office, hotel and garage building for Charles A. Sammon of Dallas, Texas, and Paul Robinson of Tucson, Arizona, to be built on the corner of Van Ness, Geary, Post and Franklin streets, San Francisco.

The garden type hotel will provide 500 rooms, large heated swimming pools, and shops. Facilities in the office building will provide for a 1000 car garage. Estimated cost of the project is $5,000,000.

ARCADIA METAL NAMES SALES REPRESENTATIVE

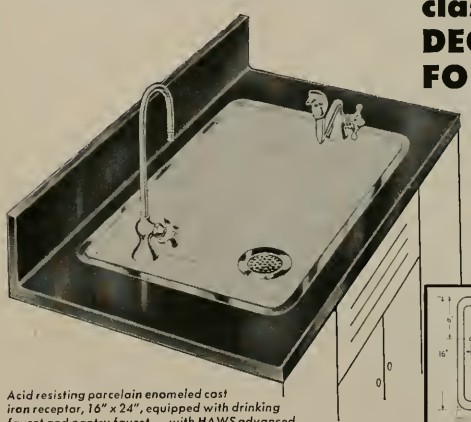
David F. Smith has been appointed San Gabriel Valley sales representative for the Arcadia Metal Products Company, according to an announcement by D. P. Johnson, sales manager.

Smith takes over this Southern California territory following several years experience with the firm in the manufacturing end of the business.

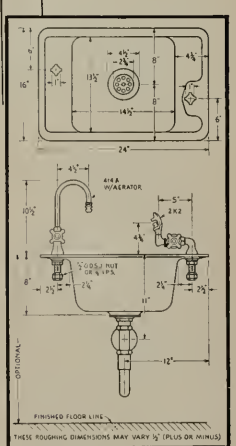
New School Project on the Board?

...add "the touch" that makes it really new...

HAWS classroom DECK-TYPE FOUNTAINS



Acid resisting porcelain enameled cast iron receptor, 16" x 24", equipped with drinking faucet and pantry faucet...with HAWS advanced sanitation features for utmost cleanliness and safety.



Specify water facilities where they're needed most—right in the classroom! HAWS versatile deck-type fountains are available with optional combinations of VANDAL-PROOF faucets and fixtures to meet any classroom need.

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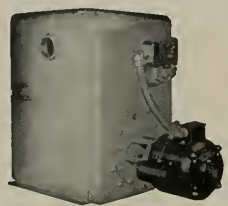

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BOOK REVIEWS
PAMPHLETS AND CATALOGUES

A TREATISE ON SURVEYING, Sixth Edition, VOL. 1, 2. By Middleton & Chadwick, Edited by Prof. W. Fisher Cassie, M.S., Ph.D., F.R.S.E., M.I.C.E., M.I.Struct E., Philosophical Library, Inc., Publishers. 15 East 40th Street, New York City 16, N. Y. Price $20.00 per set.

This two volume work has been for many years a standard work on surveying and in this new edition it has been brought fully into line with modern practice and needs. Much of this work has been recast and rewritten, each chapter being undertaken by a prominent expert in its particular field. Special attention has been paid to the most recent developments in surveying technique, such as those of echo sounding in hydrographic work and the accurate location of aircraft in air survey. Illustrations have been redrawn and new ones added; numerous charts, maps, and drawings.

FOUNDATIONS—Design and Practice. By Elwyn E. Seelye. John Wiley & Sons, Inc., Publishers. 440 Fourth Ave., New York City 16, N. Y. Price $16.00.

This book is a complete treatment of foundations, covering design, construction methods, cost specifications, and field practice. In one convenient volume you have up-to-date information on all phases of foundation work, including subsurface exploration, inspection, foundation reports, specifications, estimates, contracts, and design.

The author begins with elementary material, and then goes on to give the do's and dont's of successful foundation design and practice. Many carefully worked-out drawings illuminate and clarify the text material.

FOUNDATION ENGINEERING. By Rolt Hammond, A.C.G.I., A.M.I.C.E. Philosophical Library, Publishers, 15 E. 40th St., New York City 16, N. Y. Price $10.00.

Dealing exclusively with practical foundation problems and their solution, this volume covers a wider field than any other work of similar size published in either Great Britain or

Now—HOLLYWOOD JR. HAS A TWIN—
THE HOLLYWOOD JR. COMBINATION FLUSH DOOR

Hollywood Jr. showing adjustable metal sash.

Hollywood Jr. showing removable sash unit.

Hollywood Jr. Twins Are All-Purpose Doors

Say goodbye forever to old fashioned screen, sash and storm doors... for here are two all purpose doors... COMBINATION SCREEN AND METAL SASH DOORS that fit all types of wall construction and harmonize with any interior styling.

Note these 4-in-1 ADVANTAGES

1 Comfort
- The Hollywood Jr. Twins permit more light in kitchen and service porches.
- Give adequate easy ventilation.
- Insect-tight, rust-proof screens.
- Sash Glass may be cleaned with ease.

2 Convenience
- No more detouring around a superfluous extra door with an armful of bundles.
- No more sagging, flimsy screen doors which invite intruders.
- Acts as an additional protection for housewife. She may converse with outsiders through sash opening without unlocking the door.
- Burglar-proof. A simple touch of fingers locks sash.

3 Economy
- Saves buying a Sash, Screen and Storm Door. Hollywood Jrs. are all 3 combined into 1 door.
- Saves on hardware, hanging and painting.
- Saves on expensive replacements.
- Saves space... The Hollywood Jr. Twins may be hung to swing in or out. Leaves available floor space which is usually lost in kitchen or entry way.

4 Panel or Flush
- Hollywood Jr. Twins give you your choice of a panel or flush door to harmonize with any style architecture or interior design.
- Flush doors available in Philippine Luaun, Oriental Ash (Sen) or Birch.
- Panel doors available in pine only.

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America and is believed to be the most up-to-date and concise book of its kind. Much of the information given has not previously been available in book form, i.e. a chapter on foundations for machines. About 40 photographs are used to show actual construction and the problems they presented; line drawings illustrate and amplify the author's explanations and descriptions. List of reference papers and books.

A DICTIONARY OF ENGLISH DOMESTIC ARCHITECTURE. By A. L. Osborne. Philosophical Library, Publishers. 15 East 40th Street, New York City 16, N. Y. Price $6.00.

The purpose of this book is to provide the practical information that will enable an intelligent interest to be taken in the houses around us, and is intended as an introduction to a large subject that will be acceptable to students and amateurs, setting out in a simple and straight-forward way the elements of history, planning, structure, ornament and design by means of definitions of a large number of terms in general use, linked with a series of essays on important subjects and illustrated with specially prepared drawings.

The 200 drawings are a most important feature of the Dictionary which ranges from Norman times to the present day. It is cross-referenced and easy to consult.

THE ART OF HOME LANDSCAPING. By Garrett Eckbo. F. W. Dodge Corpn, Publishers, 119 West 40th Street, New York City, 18, N. Y. 288 pages. $5.95.

Drawing upon his 20-years experience as a landscape architect, teacher, and author, Eckbo tells how to plan, build, and plant to achieve useful and beautiful outdoor space for living, and how to avoid the pitfalls of haphazard planting and building. Many home owners and builders put money and labor into shrubs, trees, plantings, patios, fences, without really knowing what they need or where they need it. With the help of this book, anyone can successfully evaluate the assets and liabilities of his lot, plan his landscaping in advance, and substitute pencil work for back-breaking trial and error.

Discussed in detail are such subjects as recognizing your needs, drawing plans, scheduling your work and money, methods of attaining small lot privacy, separation of utility and recreation areas, and solutions to problems like irregular lots and slopes. Over 275 photographs and original line drawings illustrate the text.

NEW CATALOGUES AVAILABLE

Architects, Engineers, Contractors, Planning Commission members—the catalogues, folders, new building products material, etc., described below may be obtained by directing your request to the name and address given in each item.

Dress-up bathroom styling. Just released an attractive 2-color,8-page catalogue (AIA File No. 29) which pictures in detail many items in bathroom cabinets and accessories; beautifully illustrated; specifications. Free copy, write DEPT. A&E, The Grote Mfg. Co., Bellevue, Ky.

Plaster and accoustical systems. New 8-page booklet of data on vermiculite plaster and acoustical systems contains a summary of fire tests, suggested specifications, and information on all uses of vermiculite in plastering and acoustical treatment; including base coat gypsum plastering, fireproofing, and insulating back-up for spandrel walls. Copy available DEPT. A&E, Zonolite Co., 135 S. LaSalle St., Chicago 3, Ill.

Perimeter insulation. New 4-page, 2-color Bulletin on the design, application and test data for Perimeter Insulation; describes installation and gives data, together with drawings, on outside walls, concrete slab on ground, crawl space, heating or cooling ducts in slab; specifications; for residential, commercial and industrial. Write DEPT. A&E, United States Mineral Wool Co., Stanhope, New Jersey.

All aluminum sliding glass doors. New brochure describes "unhanded" sliding units (AIA FILE No. 16-E), either right or left hand sliding by exclusive design two-piece tension mounted, interlocking stiles that make the two lite units completely interchangeable; specifications, construction and installation data. Free copy write DEPT. A&E, T. V. Walker & Son, Inc., 217 N. Lake St., Burbank, California.

Condensed reference file of Bakelite Plastic. Revised 1957 edition now available; 16-page booklet tells, in easily understood terms, distinguishing characteristics, appropriate fabricating technique, and major fields of application for six major types of plastic currently used by industry in more than 50

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different forms; more than 80 photos and sketches illustrate some typical and proper uses; handy charts indicate wide variety of plastics available so that engineer, architect, designer or fabricator can find the material best fitted for his use in the initial stages of product planning. Write DEPT. A&E, Bakelite Company, 30 E. 42nd St., New York 17.

Decorative brick. New brochure on interior decorative brick (non-ceramic); for design accents in the home or other interiors; no mortar, no foundation; illustrations show many uses and applications. Write for free copy DEPT. A&E, Vermiculite Mfg. Co., 4618 14th Ave. N. W., Seattle 7, Wash.

Richmond handbook. 46-page, illustrated "Richmond" handbook of engineered tying devices, anchorages and accessories for concrete construction (AIA File No. 4-D3); handy index, specifications, design charts, photos of typical uses, spacing charts, etc. Free copy write DEPT. A&E, Richmond Screw Anchor Co., Inc., 1750 San Marino Ave., San Marino 9, Calif.

Axial Airfoil fans. New brochure describes in detail entire line of Axial Airfoil fans; 20-page booklet illustrates 8 distinct fans with dimensional charts, performance tables, certified ratings and operational descriptions; 14 fans with diameters from 12" to 72"; air moving capacity from 1200 to 100,000 cu. ft. per min. Copy available write DEPT. A&E, E. R. Anderson, Chicago Blower Corp., 9863 Pacific Ave., Franklin Park, Ill.

Window file—by Universal. A comprehensive file of full and quarter scale window and screen details designed for convenient tracing is available; contains 16-page catalog giving standard aluminum dimensions and details; specifications for Universal awning, projected, casement and window wall units; illustrates all types of hardware, remote control operators, and screening. Free copy available. Write DEPT. A&E, Universal Window Co., 950 Parker St., Berkeley 10, California.

Illumination design data. New 48-page booklet designed as a basic reference for architects, engineers, and designers of interior lighting installations; contains a section describing the footcandle levels required for each group of seeing tasks—related to many hundreds of rooms and areas in nearly every variety of general and industrial interiors; lists specific recommendations for armories, churches, washrooms, stairways, kitchens, hospitals, schools, airplanes, and many industrial area. Copies available, write DEPT. A&E, Westinghouse Lamp Division, Bloomfield, N. J.

Steel structure painting. The Steel Structures Painting Bulletin has just been issued by the Steel Structure Painting Council; an 8-page technical publication reporting new and interesting developments; results of paint testing, abstracts of pertinent technical articles, investigations of paint failures, and reports of highly successful paint performances. Free copy write DEPT. A&E, Steel Structures Painting Council, 4400 5th Ave., Pittsburgh 13, Penna.

Stone in homes of distinction. New brochure (AIA File No. 8) shows many actual photographs of the use of stone as a material in home construction; interior and exterior, fireplaces, costs; published by Building Stone Institute, available to architects, engineers, builders free from DEPT. A&E, Western States Stone Co., P.O. Box 312, Santa Clara, Calif.

ARCHITECTS...

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ESTIMATOR'S GUIDE

BUILDING AND CONSTRUCTION MATERIALS

PRICES GIVEN ARE FIGURING PRICES AND ARE MADE UP FROM AVERAGE QUOTATIONS FURNISHED BY LeROY CONSTRUCTION SERVICES. 3% SALES TAX ON ALL MATERIALS BUT NOT LABOR.

All prices and wages quoted are for San Francisco and the Bay District. There may be slight fluctuation of prices in the interior and southern part of the state. Freight cartage and labor travel time must be added in figuring country work.

BONDS—Performance or Performance plus Labor and Material Bond(s), $10 per $1000 on contract price. Labor & Material Bond(s) only, $5.00 per $1000 on contract price.

BRICKWORK—MASONRY—

Common Brick—Per 1 M laid—$150.00 up (according to class of work).
Face Brick—Per 1 M laid—$200.00 and up (according to class of work).
Brick Steps—$3.00 and up.
Common Brick Veneer on Frame Bldgs.—Approx. $1.20 and up—(according to class of work).
Face Brick Veneer on Frame Bldgs.—Approx. $2.00 and up (according to class of work).
Common Brick—$46.00 per M truckload lots, delivered.
Face Brick—$81.00 to $106.00 per M, truckload lots, delivered.

Glazed Structural Units—Walls Eractad—
Clear Glazed—
2 x 6 x 12 Furring ..... $1.75 per sq. ft.
4 x 6 x 12 Partition ..... 2.00 per sq. ft.
4 x 6 x 12 Double Facad Partition ..... 2.25 per sq. ft.
For colored glaze add ..... .30 per sq. ft.
Mantel Fire Brick $150.00 per M—F.O.B. Pittsburgh.

Fire Brick—Per M—$111.00 to $147.00.
Cartage—Approx. $10.00 per M.
Paving—$75.00.

Building Tile—
8x5½x12-inches, per M $139.50
6x5½x12-inches, per M 105.00
4x5½x12-inches, per M 84.00

Hollow Tile—
12x12x2-inches, per M $146.75
12x12x3-inches, per M 156.85
12x12x4-inches, per M 177.10
12x12x6-inches, per M 235.30
F.O.B. Plant

BUILDING PAPER & FELTS—

1 ply per 1000 ft. roll $5.30
2 ply per 1000 ft. roll 7.80
3 ply per 1000 ft. roll 9.70
Brownskin, Standard 500 ft. roll 6.85
Sisalkraft, reinforced, 500 ft. roll 8.50

Sheathing Papers—
Asphalt sheathing, 15-lb. roll $2.70
30-lb. roll 3.70
Dampcourse, 216-ft. roll 2.95
Blue Plasterboard, 60-lb. roll 5.10

Felt Papers—
Deadening felt, ¾-lb., 50-ft. roll $4.30
Deadening felt, 1-lb. 5.05
Asphalt roofing, 15-lbs. 2.70
Asphalt roofing, 30-lbs. 3.70

Roofing Papers—
Standard Grade, 108-ft. roll, Light $2.50
Smooth Surface, Medium 2.90
Heavy 3.40
M. S. Extra Heavy 3.95

CONCRETE AGGREGATES—

The following prices net to Contractors unless otherwise shown. Carload lots only.

	Bunker per ton	Del'd per ton
Gravel, all sizes	$2.70	$3.45
Top Sand	2.80	3.55
Concrete Mix	2.75	3.50
Crushed Rock, ¼" to ¾"	3.10	3.85
Crushed Rock, ¾" to 1½"	3.10	3.85
Roofing Gravel	2.90	3.65
River Sand	2.95	3.45
Sand—		
Lapis (Nos. 2 & 4)	3.35	4.10
Olympia (Nos. 1 & 2)	2.95	3.45

Cement—
Common (all brands, paper sacks), Per Sack, small quantity (paper) $1.25
Carload lots, in bulk, per bbl 3.59
Cash discount on carload lots, 10c a bbl., 10th Prox., less than carload lots, $5.00 er bbl. f.o.b. warehouse or $5.40 delivered.
Cash discount on L.C.L. 2%
Trinity White, Medusa White, Calaveras White ..... 1 to 100 sacks, $3.50 sack; warehouse or del.; $11.40 bbl. carload lots.

CONCRETE READY-MIX—

Delivered in 5-yd. loads: 6 sk $13.15
Curing Compound, clear, drums, per gal. 1.03

CONCRETE BLOCKS—

	Haydite	Basalt
4x8x16-inches, each	$ .21	$ .21
6x8x16-inches, each	.26	.26
8x8x16-inches, each	.30	.30
12x8x16-inches, each	.41	.41
12x8x24-inches, each	—	.64

Aggregates—Haydite or Basalite
¾-inch to ⅜-inch, per cu. yd. $7.75
⅜-inch to ⅛-inch, per cu. yd. 7.75
No. 6 to 0-inch, per cu. yd. 7.75

DAMPPROOFING and Waterproofing—

Two-coat work, $10.00 per square.
Membrane waterproofing—4 layers of saturated felt, $12.00 per square.
Hot coating work, $6.00 per square.
Medusa Waterproofing, $3.50 per lb. San Francisco Warehouse.
Tricosal concrete waterproofing, 60c a cubic yd. and up.

ELECTRIC WIRING—$20 to $25 per outlet for conduit work (including switches). Knob and tube average $9.00 per outlet.

ELEVATORS—

Prices vary according to capacity, speed and type. Consult elevator companies. Average cost of installing a slow speed automatic passenger elevator in small four story apartment building, including entrance doors, about $9,500.00.

EXCAVATION—

Sand, $1.25, clay or shale, $2.00 per yard. Trucks, $35 to $55 per day.

Above figures are an average without water. Steam shovel work in large quantities, less; hard material, such as rock, will run considerably more.

FIRE ESCAPES—

Ten-foot galvanized iron balcony, with stairs, $275 installed on new buildings; $325 on old buildings.

FLOORS—

Asphalt Tile, ⅛ in. gauge 18c to 35c per sq. ft.
Composition Floors, such as Magnetite, 40c-$1.25 per sq. ft.
Linoleum, standard gauge, sq. yd. $2.75
Mastipave—$1.50 per sq. yd.
Battleship Linoleum—⅛"—$3.00 sq. yd.
Terazzo Floors—$2.00 per sq. ft.
Terazzo Steps—$2.50 per lin. ft.
Mastic Wear Coat—according to type—20c to 35c.

Hardwood Flooring—
Oak Flooring—T & G—Unfin.—

	33/32x2¼	½x2	⅜x2	¼x2
	$	$	$	$
Clear Qtd., White	425	405		
Clear Qtd., Red	405	380		
Select Qtd., Red or White	355	340		
Clear Pln., Red or White	355	340	335	315
Select Pln., Red or White	340	330	325	300
#1 Common, red or White	315	310	305	280
#2 Common, Red or White	305			

Prefinished Oak Flooring—

	Prime	Standard
½ x 2	$369.00	$359.00
½ x 2½	380.00	370.00
25/32 x 2¼	390.00	381.00
25/32 x 2¾	375.00	355.00
25/32 x 3¼	395.00	375.00
25/32 x 2¼ & 3¼ Ranch Plank		415.00

Unfinished Maple Flooring—

25/32 x 2¼ First Grade	$390.00
25/32 x 2¼ 2nd Grade	365.00
25/32 x 2¼ 2nd & Btr. Grade	375.00
25/32 x 2¼ 3rd Grade	240.00
25/32 x 3¼ 3rd & Btr. Jtd. EM	380.00
25/32 x 3½ 2nd & Btr. Jtd. EM	390.00
33/32 x 2¼ First Grade	400.00
33/32 x 2¼ 2nd Grade	360.00
33/32 x 2¼ 3rd Grade	320.00
Floor Layer Wage $2.83 per hr.	

GLASS—

Single Strength Window Glass	$ .30 per □ ft.
Double Strength Window Glass	.45 per □ ft.
Plate Glass, ¼ polished to 75	1.60 per □ ft.
75 to 100	1.74 per □ ft.
¼ in. Polished Wire Plate Glass	2.50 per □ ft.
¼ in. Rgh. Wire Glass	.80 per □ ft.
⅛ in. Obscure Glass	.44 per □ ft.
3/32 in. Obscure Glass	.63 per □ ft.
⅛ in. Heat Absorbing Obscure	.54 per □ ft.
3/32 in. Heat Aborbing Wire	.72 per □ ft.
⅛ in. Ribbed	.44 per □ ft.
3/32 in. Ribbed	.63 per □ ft.
⅛ in. Rough	.44 per □ ft.
3/32 in. Rough	.63 per □ ft.
Glazing of above additional $.15 to	.30 per □ ft.
Glass Blocks, set in place	3.50 per □ ft.

HEATING—Installed

Furnaces—Gas Fired
Floor Furnace, 25,000 BTU $42.00- 80.00
35,000 BTU 47.00- 87.00
45,000 BTU 55.00- 95.00
Automatic Control, Add 39.00- 45.00
Dual Wall Furnaces, 25,000 BTU 72.00-134.00
35,000 BTU 149.00
45,000 BTU 161.00
With Automatic Control, Add 45.00-161.00
Unit Heaters, 50,000 BTU 215.00
Gravity Furnace, 65,000 BTU 210.00
Forced Air Furnace, 75,000 BTU 342.00
Water Heaters—5-year guarantee
With Thermostat Control,
20 gal. capacity 96.00
30 gal. capacity 112.00
40 gal. capacity 135.00

INSULATION AND WALLBOARD—

Rockwool Insulation—
(2") Less than 1,000 □ ft. $64.00
(2") Over 1,000 □ ft. 59.00
Cotton Insulation—Full-thickness
(1") ..... $41.60 per M sq. ft.
Sisalation Aluminum Insulation—Aluminum coated on both sides ..... $23.50 per M sq. ft.
Tileboard—4'x6' panel ..... $9.00 per panel
Wallboard—½" thickness ..... $55.00 per M sq. ft.
Finished Plank ..... 69.00 per M sq. ft.
Ceiling Tileboard ..... 69.00 per M sq. ft.

IRON—Cost of ornamental iron, cast iron, etc., depends on designs.

LUMBER—

S4S No. 2 and better common
O.P. or D.F., per M. f.b.m. $110.00

Flooring—

	Per M Delvd.
V.G.-D.F. B & Btr. 1 x 4 T & G Flooring	$225.00
"C" and better—all	215.00
"D" and better—all	145.00
Rwd. Rustic—"A" grade, medium dry. 8 to 24 ft.	185.00

Plywood, per M sq. ft.
¼-inch, 4.0x8.0-SIS $100.00
½-inch, 4.0x8.0-SIS 150.00
¾-inch, per M sq. ft. 210.00
Plysform 87.00

Shingles (Rwd. not available)—
Red Cedar No. 1—$9.50 per square; No. 2, $7.00; No. 3, $5.00.
Average cost to lay shingles, $6.00 per square.
Cedar Shakes—½" to ¾" x 24/26 in handsplit tapered or split resawn, per square $15.25
¾" to 1¼" x 24/26 in split resawn, per square 17.00
Average cost to lay shakes, $8.00 per square.

Pressure Treated Lumber—
Salt Treated ..... Add $35 per M to above
Creosoted, 8-lb. treatment ..... Add $45 per M to above

MARBLE—(See Dealers)

METAL LATH EXPANDED—

Standard Diamond. 3.40, Copper Bearing, LCL, per 100 sq. yds. $45.50
Standard Ribbed, ditto $49.50

MILLWORK—Standard.

D. F. $150 per 1000, R. W. Rustic $175 per 1000 (delivered).
Complete door unit, $15 to $25.
Screen doors, $8.00 to $12.00 each.
Patent screen windows, $1.25 a sq. ft.
Cases forf kitchen pantries seven ft. high, per lineal ft., upper $9.00 to $11.00; lower $12.00 to $13.00.
Dining room cases, $20 per lineal foot. Rough and finish about $1.00 per sq. ft.
Labor—Rough carpentry, warehouse heavy framing (average), $75.00 per M.
For smaller work average, $85.00 to $100. per 1000.

PAINTING—

Two-coat work ..... per yard	$ .75
Three-coat work ..... per yard	1.00
Cold water painting ..... per yard	25c
Whitewashing ..... per yard	15c

Linseed Oil, Strictly Pure (Basis 7¾ lbs. per gal.)	Raw	Boiled	Wholesale
Light iron drums ..... per gal.	$2.28		$2.34
5-gallon cans ..... per gal.	2.40		2.46
1-gallon cans ..... each	2.52		2.58
Quart cans ..... each	.71		.72
Pint cans ..... each	.38		.39
½-pint cans ..... each	.24		.24

Turpentine (Basis, 7.2 lbs. per gal.)	Pure Gum Spirits
Light iron drums ..... per gal.	$1.65
5-gallon cans ..... per gal.	1.76
1-gallon cans ..... each	1.88
Quart cans ..... each	.54
Pint cans ..... each	.31
½-pint cans ..... each	.20

Pioneer White Lead in Oil Heavy Paste and All-Purpose (Soft-Paste)

Net Weight Packages	List Price Per 100 lbs.	List Price Pr. per pkg.	Price to Painters per 100 lbs.	Price to Painters Pr. per pkg.
100-lb. kegs	$28.35	$29.35	$27.50	$27.50
50-lb. kegs	30.05	15.03	28.15	14.08
25-lb. kegs	30.35	7.50	28.45	7.12
5-lb. cans*	33.35	1.34	31.25	1.25
1-lb. cans*	36.00	.36	33.75	.34

500 lbs. (one delivery) ¾c per pound less than above.
*Heavy Paste only.

Pioneer Dry White Lead—Litharge—Dry Red Lead
Red Lead in Oil
Price to Painters—Price Per 100 Pounds

	100 lbs.	50 lbs.	25 lbs.
Dry White Lead	$26.30	$....	$....
Litharge	25.95	26.60	26.90
Dry Red Lead	27.20	27.85	28.15
Red Lead in Oil	30.65	31.30	31.60

Pound cans, $.37 per lb.

PATENT CHIMNEYS—

6-inch	$2.50 lineal foot
8-inch	3.00 lineal foot
10-inch	4.00 lineal foot
12-inch	5.00 lineal foot

PLASTER—

Neat wall, per ton delivered in S. F. in paper bags, $17.60.

PLASTERING (Interior)—

	Yard
3 Coats, metal lath and plaster	$3.50
Keene cement on metal lath	4.00
Ceilings with ¾ hot roll channels metal lath (lathed only)	3.50
Ceilings with ¾ hot roll channels metal lath plastered	5.00
Single partition ¾ channels and metal lath 1 side (lath only)	3.50
Single partition ¾ channels and metal lath 2 inches thick plastered	8.50
4-inch double partition ¾ channels and metal lath 2 sides (lath only)	6.00
4-inch double partition ¾ channels and metal lath 2 sides plastered	10.00

PLASTERING (Exterior)—

	Yard
2 coats cement finish, brick or concrete wall	$3.00
3 coats cement finish, No. 18 gauge wire mesh	4.00

Lime—$4.25 per bbl. at yard.
Processed Lime—$4.50 per bbl. at yard.
Rock or Grip Lath—⅜"—35c per sq. yd.
Rock or Grip Lath—⅝"—32c per sq. yd.
Composition Stucco—$4.50 sq. yd. (applied).

PLUMBING—

From $250.00 - $300.00 per fixture up, according to grade, quality and runs.

ROOFING—

"Standard" tar and gravel, 4 ply. ... $16.50 per sq. for 30 sqs. or over.
Less than 30 sqs. $16.00 per sq.
Tile $40.00 to $50.00 per square.
No. 1 Redwood Shingles in place. 4½ in. exposure, per square $18.25
5/2 No. 1 Cedar Shingles, 5 in. exposure, per square 14.50
5/8 x 16"—No. 1 Little Giant Cedar Shingles, 5" exposure, per square .. 18.25
4/2 No. 1-24" Royal Cedar Shingles 7½" exposure, per square 23.00
Re-coat with Gravel $5.50 per sq.
Asbestos Shingles, $27 to $35 per sq. laid ½ to ¾ x 25" Resawn Cedar Shakes, 10" Exposure $30.00
¾ to 1¼ x 25" Resawn Cedar Shakes, 10" Exposure $35.00
1 x 25" Resawn Cedar Shakes, 10" Exposure $22.00
Above prices are for shakes in place.

SEWER PIPE—

Vitrified, per foot: L.C.L. F.O.B. Warehouse, San Francisco.
Standard, 4-in. ..... $ .26
Standard, 6-in. ..... .46
Standard, 8-in. ..... .66
Standard, 12 in. 1.30
Standard, 24-in. 5.41
Clay Drain Pipe, per 1,000 L.F.
L.C.L., F.O.B. Warehouse, San Francisco:
Standard, 6-in. per M. $240.00
Standard, 8-in. per M. 400.00

SHEET METAL—

Windows—Metal, $2.50 a sq. ft.
Fire doors (average), including hardware $2.80 per sq. ft., size 12'x12'. $3.75 per sq. ft., size 3'x6'.

SKYLIGHTS—(not glazed)

Galvanized iron, per sq. ft. $1.50
Vented hip skylights, per sq. ft. 2.50
Aluminum, puttyless, (unglazed), per sq. ft. 1.25
(installed and glazed), per sq. ft. ... 1.85

STEEL—STRUCTURAL—

$325 & up per ton erected, when out of mill.
$350 per ton erected, when out of stock.

STEEL REINFORCING—

$185.00 & up per ton, in place.

¼-in. Rd. (Less than 1 ton) per 100 lbs.	$8.90
⅜-in. Rd. (Less than 1 ton) per 100 lbs.	7.80
½-in. Rd. (Less than 1 ton) per 100 lbs.	7.50
⅝-in. Rd. (Less than 1 ton) per 100 lbs.	7.25
¾-in. & ⅞-in. Rd. (Less than 1 ton)	7.15
1 in. & up (Less than 1 ton)	7.10

1 ton to 5 tons, deduct 25c.

STORE FRONTS—

Individual estimates recommended. See ESTIMATORS DIRECTORY for Architectural Veneer (3), and Mosaic Tile (35).

TILE—

Ceramic Tile Floors—Commercial $1.60 to $2.00 per sq. ft.
Cove Base—$1.40 per lin. ft.
Quarry Tile Floors, 6x6" with 6" base @ $1.60 per sq. ft.
Tile Wainscots & Floors, Residential, 4¼x4¼", @ $1.65 to $2.00 per sq. ft.
Tile Wainscots, Commercial Jobs, 4¼x4¼" Tile, @ $1.50 to $2.00 per sq. ft.
Asphalt Tile Floor ⅛" - ⅜" ..... $ .18 - $ .35 sq. yd. Light shades slightly higher.
Cork Tile—$ .70 per sq. ft.
Mosaic Floors—See dealers.
Linoleum tile, per □ ft. ..... $ .65
Rubber tile, per □ ft. ..... $ .55 to $ .75

Furring Tile

Scored	F.O.B. S. F.
12 x 12, each	$ .17

Kraftile: Per square foot	Small Lots	Large Lots
Patio Tile—Niles Red		
12 x 12 x ⅞-inch, plain	$ .28	$ .253
8 x 12 x ⅞-inch, plain	.295	.265
6 x 6 x ⅞-inch, plain	.32	.287

Building Tile—

8x5½x12-inches, per M	$139.50
6x5½x12-inches, per M	105.00
4x5½x12-inches, per M	84.00

Hollow Tile—

12x12x2-inches, per M	$146.75
12x12x3-inches, per M	156.85
12x12x4-inches, per M	177.10
12x12x6-inches, per M	235.30

F.O.B. Plant

VENETIAN BLINDS—

75c per square foot and up. Installation extra.

WINDOWS—STEEL—INDUSTRIAL—

Cost depends on design and quality required.

ARCHITECT AND ENGINEER
ESTIMATOR'S DIRECTORY
Building and Construction Materials

EXPLANATION—Building and construction materials are shown in major classified groups for general identification purposes with names and addresses of suppliers of materials listed in detail under group classification where name first appears—main offices are shown first with branch or district offices following. The numeral appearing in listings *(3) refers to the major group classification where complete data on the dealer, or representative, may be found.

ADHESIVES (1)
Wall and Floor Tile Adhesives
THE CAMBRIDGE TILE MFG. CO. *(35)

AIR CONDITIONING (2)
Air Conditioning & Cooling
UTILITY APPLIANCE CORP.
Los Angeles 58: 4851 S. Alameda St.
San Francisco: 1355 Market St., UN 1-4908

ARCHITECTURAL PORCELAIN ENAMEL (2a)
CALIFORNIA METAL ENAMELING CO.
Los Angeles: 6904 E. Slauson, RA 3-6351
San Francisco: Continental Bldg. Products Co., 178 Fremont St.
Seattle: Foster-Bray Co., 2412 1st Ave. So.
Spokane: Bernhard & Schafer, Inc., West 34, 2nd Ave.
Salt Lake City: S. A. Roberts & Co., 109 W. 2nd So.
Dallas: Offenhauser Co., 2201 Telephone Rd.
El Paso: Architectural Products Co., 506 E. Yandell Blvd.
Phoenix: Haskell-Thomas Co., 3808 No. Central
San Diego: Maloney Specialties, Inc., 823 W. Laurel St.
Boise: Intermountain Glass Co., 1417 Main St.

ARCHITECTURAL VENEER (3)
Ceramic Veneer
GLADDING, McBEAN & CO.
San Francisco: Harrison at 9th St., UN 1-7400
Los Angeles: 2901 Los Feliz Blvd., OL 2121
Portland: 110 S.E. Main St., EA 6179
Seattle 99: 945 Elliott Ave., West, GA 0330
Spokane: 1102 N. Monroe St., BR 3259
KRAFTILE COMPANY
Niles, Calif., Niles 3611
ROBCO OF CALIFORNIA, INC.
San Francisco: 260 Kearny St., GA 1-6720
Los Angeles: 2366 Venice Blvd., RE 1-4067
Porcelain Veneer
PORCELAIN ENAMEL PUBLICITY BUREAU
Oakland 12: Room 601, Franklin Building
Pasadena 8: P. O. Box 186, East Pasadena Station
Granite Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339
Marble Veneer
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles: 3522 Council St., DU 2-6339

BANKS - FINANCING (4)
CROCKER FIRST NATIONAL BANK OF S. F.
San Francisco, Post & Montgomery Sts., EX 2-7700

BATHROOM FIXTURES (5)
Metal
THE CAMBRIDGE TILE MFG. CO. *(35)
DILLON TILE SUPPLY COMPANY
San Francisco: 252 12th St., HE 1-1206
Ceramic
THE CAMBRIDGE TILE MFG. CO. *(35)

BRASS PRODUCTS (6)
GREENBERG'S, M. & SONS
San Francisco 7: 765 Folsom, EX 2-3143
Los Angeles 23: 1258 S. Boyle, AN 3-7108
Seattle 4: 1016 First Ave. So., MA 5140
Phoenix: 3009 N. 19th Ave., Apt. 92, PH 2-7663
Portland 4: 510 Builders Exch. Bldg., AT 6443

BRICKWORK (7)
Face Brick
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
REMILLARD-DANDINI CO.
San Francisco 4: 400 Montgomery St., EX 2-4988

BRONZE PRODUCTS (8)
GREENBERG'S, M. & SONS *(6)
MICHEL & PFEFFER IRON WORKS *(38)

BUILDING PAPERS & FELTS (9)
ANGIER PACIFIC CORP.
San Francisco 5: 55 New Montgomery St., DO 2-4416
Los Angeles: 7424 Sunset Blvd.
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY
San Francisco 5: 55 New Montgomery St., EX 2-3066
Chicago, Ill.: 205 West Wacker Drive

BUILDING HARDWARE (9a)
THE STANLEY WORKS
San Francisco: Monadnock Bldg., YU 6-5914
New Britain, Conn.

CABINETS & FIXTURES (9b)
FINK & SCHINDLER CO., THE;
San Francisco: 552 Brannan St., EX 2-1513

CEMENT (10)
IDEAL CEMENT COMPANY (Pacific Division)
San Francisco 4: 310 Sansome St., GA 1-4100
PACIFIC COAST AGGREGATES, INC. *(11)

CONCRETE AGGREGATES (11)
Ready Mixed Concrete
PACIFIC COAST AGGREGATES, INC.
San Francisco: 400 Alabama St., KL 2-1616
Sacramento: 16th and A Sts., GI 3-6586
San Jose: 790 Stockton Ave., CY 2-5620
Oakland: 2400 Peralta St., GL 1-0177
Stockton: 820 So. California St., ST 8-8643
Lightweight Aggregates
AMERICAN PERLITE CORP.
Richmond: 26th & B St. - Yd. 2, RI 4307

CONCRETE ACCESSORIES (11a)
Screed Materials
C & H SPECIALTIES CO.
Berkeley: 909 Camelia St., LA 4-5358

CONSTRUCTION SERVICES (11a)
LE ROY CONSTRUCTION SERVICES
San Francisco, 143 Third St., SU 1-8914

DECKS—ROOF (11b)
UNITED STATES GYPSUM CO.
2322 W. 3rd St., Los Angeles 54, Calif.
300 W. Adams St., Chicago 6, Ill.

DOORS (12)
THE BILCO COMPANY
New Haven, Conn.
Electric Doors
ROLY-DOOR SALES CO.
San Francisco, 5976 Mission St., PL 5-5089
Folding Doors
WALTER D. BATES & ASSOCIATES
San Francisco, 693 Mission St., GA 1-6971
Hollywood Doors
WEST COAST SCREEN CO.
Los Angeles: 1127 E. 63rd St., AD 1-1108
T. M. COBB CO.
Los Angeles & San Diego
W. P. FULLER CO.
Seattle, Tacoma, Portland
HOGAN LUMBER CO.
Oakland: 700 - 6th Ave.
HOUSTON SASH & DOOR
Houston, Texas
SOUTHWESTERN SASH & DOOR
Phoenix, Tucson, Arizona
El Paso, Texas
WESTERN PINE SUPPLY CO.
Emeryville: 5760 Shellmound St.
GEO. C. VAUGHAN & SONS
San Antonio & Houston, Texas
Screen Doors
WEST COAST SCREEN DOOR CO.
(See above)

FIRE ESCAPES (13)
MICHEL & PFEFFER IRON WORKS *(38)

FIREPLACES (14)
Heat Circulating
SUPERIOR FIREPLACE CO.
Los Angeles: 1708 E. 15th St., PR 8393
Baltimore, Md.: 601 No. Point Rd.

FLOORS (15)
Hardwood Flooring
HOGAN LUMBER COMPANY
Oakland: Second and Alice Sts., GL 1-6861
Floor Tile
GLADDING, McBEAN & CO. *(3)
KRAFTILE *(35)
Floor Tile (Ceramic Mosaic)
THE CAMBRIDGE TILE MFG. CO. *(35)
Floor Treatment & Maintenance
HILLYARD SALES CO. (Western)
San Francisco: 470 Alabama St., MA 1-7766
Los Angeles: 923 E. 3rd, TR 8282
Seattle: 3440 E. Marginal Way
Diversified (Magnesite, Asphalt Tile, Composition, Etc.)
LE ROY OLSON CO.
San Francisco 10: 3070 - 17th St., HE 1-1088
Sleepers (Composition)
LE ROY OLSON CO.

GLASS (16)
W. P. FULLER COMPANY
San Francisco: 301 Mission St., EX 2-7151
Los Angeles, Calif.
Portland, Ore.

GRANITE (16a)
PACIFIC CUT STONE & GRANITE CO.
414 South Marengo Ave., Alhambra, Calif.

HEATING (17)
S. T. JOHNSON CO.
Oakland 8: 940 Arlington Ave., OL 2-6000
San Francisco: 585 Potrero Ave., MA 1-2757
Philadelphia 8, Pa.: 401 N. Broad St.
SCOTT COMPANY
San Francisco: 243 Minna St., YU 2-0400
Oakland: 113 - 10th St., GL 1-1937
San Jose, Calif.
Los Angeles, Calif.
UTILITY APPLIANCE CORP. *(12)
Electric Heaters
WESIX ELECTRIC HEATER CO.
San Francisco 5: 390 First St., GA 1-2211
Los Angeles: 520 W. 7th St., MI 8096
Portland: Terminal Sales Bldg., BE 2056
Seattle: Securities Bldg., SE 5028
Spokane: Realty Bldg., MAdison 6175
San Diego: 514 Spreckels Bldg., BEImont 4-6082
Designer of Heating
THOMAS B. HUNTER
San Francisco 4: 41 Sutter St., GA 1-1164

INSULATION AND WALL BOARD (18)
LUMBER MANUFACTURING CO.
San Francisco: 225 Industrial Ave., JU 7-1760
PACIFIC COAST AGGREGATES, INC. *(11)
SISALKRAFT COMPANY *(9)
WESTERN ASBESTOS COMPANY
San Francisco: 675 Townsend St., KL 2-3868
Oakland: 251 Fifth Avenue, GL 1-2345
Stockton: 733 S. Van Buren, ST 4-9421
Sacramento 1331 - T St., HU 1-0125
Fresno: 434 - P St., FR 2-1600

IRON—Ornamental (10)
MICHEL & PFEFFER IRON WORKS, INC. *(13)

INTERCEPTING DEVICES (10a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3142

LANDSCAPING (20)
Landscape Contractors
HENRY C. SOTO CORP.
Los Angeles: 13,000 S. Avalon Blvd., ME 4-6617

LIGHTING FIXTURES (21)
SMOOT-HOLMAN COMPANY
Inglewood, Calif., OR 8-1217
San Francisco: 55 Mississippi St., MA 1-8474

LUMBER (22)
Shingles
LUMBER MANUFACTURING CO. *(18)

METAL GRATING (22a)
KLEMP METAL GRATING CORPN.
6601 S. Melvina, Chicago 38, Ill., PArtsmouth 7-6760

METAL FRAMING (22b)
UNISTRUT SALES OF NORTHERN CALIFORNIA
Berkeley: 1000 Ashby Ave., TH 3-4964

MARBLE (23)
VERMONT MARBLE COMPANY
San Francisco 24: 6000 3rd St., VA 6-5024
Los Angeles 4: 3522 Council St., DU 2-6339

MASONRY (23a)
GENERAL CONCRETE PRODUCTS, INC.
Van Nuys, 15025 Oxnard St., ST 5-1126 & ST 7-3289

METAL LATH EXPANDED (24)
PACIFIC COAST AGGREGATES, INC. *(11)

MILLWORK (25)
FINK & SCHINDLER, THE; CO: *(9b)
LUMBER MANUFACTURING COMPANY *(18)
MULLEN MANUFACTURING COMPANY
San Francisco: 60-80 Rausch St., UN 1-5815
PACIFIC MANUFACTURING COMPANY
San Francisco: 16 Beale St., GA 1-7755
Santa Clara: 2610 The Alameda, SC 607
Los Angeles, 6820 McKinley Ave., TH 4196

PAINTING (26)
W. P. FULLER COMPANY *(16)
Paint

PLASTER (27)
Interiors - Metal Lath & Trim
PACIFIC COAST AGGREGATES, INC. *(11)
Exteriors
PACIFIC PORTLAND CEMENT COMPANY *(28)

PLASTIC CEMENT (28)
IDEAL CEMENT COMPANY
San Francisco: 310 Sansome St., GA 1-4100

PLUMBING (29)
THE HALSEY TAYLOR COMPANY
Redlands, Calif.
Warren, Ohio
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143
THE SCOTT COMPANY *(17)
HAWS DRINKING FAUCET COMPANY
Berkeley 10: 1435 Fourth St., LA 5-3341
CONTINENTAL WATER HEATER COMPANY
Los Angeles 31: 1801 Pasadena Ave., CA 6178
SECURITY VALVE COMPANY
Los Angeles 31: 410 San Fernando Rd., CA 6191

PUMPING MACHINERY (29)
SIMONDS MACHINERY COMPANY
San Francisco: 816 Folsom St., DO 2-6794
Los Angeles: 455 East 4th St., MU 8377

PRESS (Punch) (29a)
ALVA F. ALLEN
Clinton, Missouri

RANGE-REFRIGERATOR (29a)
Combinations
GENERAL AIR CONDITIONING CORPN.
Los Angeles 23: 4542 E. Dunham St.
San Francisco: 1355 Market St., KL 2-2311, Ext. 104

RESILIENT TILE (30)
LE ROY OLSON CO. *(15)

ROOF TRUSSES (30a)
EASY BOW ENGINEERING & RESEARCH CO.
13th & Wood St., Oakland, Cal., GLencourt 2-0805

SAFES (30a)
HERMANN SAFE CO.
San Francisco, 1699 Market St., UN 1-6644

SEWER PIPE (31)
GLADDING, McBEAN & CO. *(3)

SHADES (31a)
SHADES, Inc.

SHEET METAL (32)
Windows
DETROIT STEEL PRODUCTS COMPANY
Oakland 8: 1310 - 63rd St., OL 2-8826
San Francisco: Russ Building, DO 2-0890
MICHEL & PFEFFER IRON WORKS, INC. *(13)
PACIFIC COAST AGGEGATES, INC. *(11)
Fire Doors
DETROIT STEEL PRODUCTS COMPANY
Skylights
DETROIT STEEL PRODUCTS COMPANY

SOUND EQUIPMENT (32a)
STROMBERG-CARLSON CO.
San Francisco, 1339 Mission St., UN 1-5388
Burlingame, 1805 Rollins Rd., OX 7-3630
Los Angeles, 5415 York Blvd., CL 7-3939

STEEL—STRUCTURAL (33)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP.
San Francisco: Russ Bldg., SU 1-2500
Los Angeles: 2087 E. Slauson, LA 1171
Portland: 2345 N. W. Nicolai, BE 7261
Seattle 1331 3rd Ave. Bldg., MA 1972
Salt Lake City: Walker Bank Bldg., SL 3-6733
HERRICK IRON WORKS
Oakland: 18th & Campbell Sts., GL 1-1767
JUDSON PACIFIC-MURPHY CORP.
Emeryville: 4300 Eastshore Highway, OL 3-1717
REPUBLIC STEEL CORP.
San Francisco: 116 N. Montgomery St., GA 1-0977
Los Angeles: Edison Building
Seattle: White-Henry-Stuart Building
Salt Lake City: Walker Bank Building
Denver: Continental Oil Building
SAN JOSE STEEL COMPANY
San Jose 195 North Thirtieth St., CO 4184

STEEL—REINFORCING (34)
REPUBLIC STEEL CORP. *(13)
HERRICK IRON WORKS *(13)
SAN JOSE STEEL CO. *(13)
COLUMBIA-GENEVA DIVISION, U. S. STEEL CORP. *(13)

SWIMMING POOL FITTINGS (34a)
JOSAM PACIFIC CO.
San Francisco: 765 Folsom St., EX 2-3143

POOLS
SIERRA MFG. CO.
Walnut Creek, Calif.: 1719 Mt. Diablo Blvd.

CLAY TILE (35)
THE CAMBRIDGE TILE MFG. CO.
Redwood City: 132 Wilson St.
Los Angeles 19: 1335 S. La Brea, WE 3-7800

GLADDING, McMEAN & CO. *(13)
KRAFTILE
Niles, Calif.: NIles 3611
San Francisco 5: 50 Hawthorne St., DO 2-3780
Los Angeles 13: 406 South Main St., MU 7241

TIMBER—REINFORCING (36)
Trusses
Tacoma, Wash
WEYERHAEUSER SALES CO.
St. Paul, Minn.
Newark, N. J.
Treated Timber
J. H. BAXTER CO.
San Francisco 4: 200 Bush St., YU 2-0200
Los Angeles 5: 3450 Wilshire Blvd., DU 8-9591

TRUCKING (36a)
PASSETTI TRUCKING CO.
San Francisco 3: 264 Clementina St., GA 1-5297

WALL TILE (37)
THE CAMBRIDGE TILE MFG. CO. *(35)
GLADDING, McBEAN & CO. *(3)
KRAFTILE COMPANY *(35)

WEATHERSTOP
TECON PRODUCTS, LTD.
Vancouver, B.C. 681 E. Hastings St.
TECON PRODUCTS, INC.
Seattle 4, Washington 304 So. Alaskan Way

WINDOWS STEEL (38)
DETROIT STEEL PRODUCTS CO. *(32)
MICHEL & PFEFFER IRON WORKS
212 Shaw Road, So. San Francisco, PLaza 5-8983
PACIFIC COAST AGGREGATES, INC. *(11)

GENERAL CONTRACTORS (39)
BARRETT CONSTRUCTION CO.
1800 Evans Ave., AT 8-1471
Los Angeles: 234 W. 37th Place, AD 3-8161
J. BETTANCOURT
San Bruno: 1015 San Mateo Ave., JUno 8-7525
DINWIDDIE CONSTRUCTION COMPANY
San Francisco: Crocker Building, YU 6-2718
CLINTON CONSTRUCTION COMPANY
San Francisco: 923 Folsom St., SU 1-3440
MATTOCK CONSTRUCTION COMPANY
San Francisco: 604 Mission St., GA 1-5516
E. H. MOORE & SONS
San Francisco: 693 Mission St., GA 1-8579
PARKER, STEFFENS & PEARCE
San Francisco: 135 So. Park, EX 2-6639

TESTING LABORATORIES (ENGINEERS & CHEMISTS (40)
ABBOT A. HANKS, INC.
San Francisco: 624 Sacramento St., GA 1-1697
ROBERT W. HUNT COMPANY
San Francisco: 500 Iowa, MI 7-0224
Los Angeles: 3050 E. Slauson, JE 9131
Chicago, New York, Pittsburgh
PITTSBURGH TESTING LABORATORY
San Francisco: 651 Howard St., EX 2-1747

CONSTRUCTION INDUSTRY WAGE RATES

Following are the hourly wage rates of compensation paid in the building trades in California, established by collective bargaining, as reported by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research.

Table 1—Union Hourly Wage Rates, Construction Industry, California

Following are the hourly rates of compensation established by collective bargaining, reported as of July 1, 1955 or later

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.25	3.25	3.25	3.25	3.25
BOILERMAKER	3.125	3.125	3.125	3.125	3.175	3.125	3.175	3.125	3.125	3.175	3.125	3.125	3.125
BRICKLAYER	3.65	3.55	3.55	3.35	3.50	3.50	3.625	3.65	3.60		3.50	3.375	A3.45
BRICKLAYER, HODCARRIER	2.80	2.70	2.70	2.70	2.75	2.65	2.75	2.70			2.50	2.625	
CARPENTER	2.90	2.90	2.90	2.90	2.90	2.90	2.90	2.90	e2.86	e2.86	c2.835	B2.86	D2.94
CEMENT FINISHER	2.845	2.845	2.845	2.845	2.845	2.845	2.845	2.845	E2.785	E2.785	E2.785	E2.785	E2.785
CONCRETE MIXER—Skip type (1-yd.)	2.58	2.58	2.58	2.58	2.58	2.58	2.58	2.58	F2.61	F2.61	F2.61	F2.61	F2.61
ELECTRICIAN	3.15	3.125	3.075	3.25	3.25	3.00	3.35	3.05	3.25		G3.15	3.35	3.20
ELEVATOR CONSTRUCTOR	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.27	3.35	3.35	3.35	3.35	3.35
ENGINEER: MATERIAL HOIST	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86					
GLAZIER	2.67	2.67	2.67		2.705	2.705	2.67	2.67	2.705		2.70		
IRONWORKER: ORNAMENTAL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
REINF. STEEL	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
STRUCTURAL STEEL	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10	3.10
LABORERS: BUILDING	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175	H2.16	H2.16	H2.16	H2.16	H2.16
CONCRETE	2.175	2.175	2.175	2.175	2.175	2.175	2.175	2.175					
LATHER	3.4375	3.50	3.50	3.35	3.25	3.00		3.125	I3.5625	3.375	3.50	3.4375	3.4375
MARBLE SETTER	3.175	3.175	3.175	3.175	3.175	3.175	3.175	3.175			3.125		
MOSAIC & TERRAZZO	2.975								3.07		3.125		
PAINTER—BRUSH	2.92	2.92	2.92	2.75	2.85	2.85	2.92	3.00	2.90		2.82	2.72	2.75
PAINTER—SPRAY	2.92	2.92	2.92	3.00	3.10	3.00	2.92	3.25	3.15		3.37	2.72	3.00
PILEDRIVER—OPERATOR	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	J3.18	J3.18	J3.18	J3.18	J3.18
PLASTERER	3.5625	3.54	3.54	3.275	3.25	3.30	3.43	3.50	3.5625	3.4375	3.50	3.4375	3.375
PLASTERER, HODCARRIER	2.90	3.12	3.12	3.025	2.75	2.75	2.90	3.15	3.1875	3.125	3.25	3.00	2.925
PLUMBER	3.20	3.30	3.435	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
ROOFER	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.75	2.875	2.85	3.00	2.75	2.75
SHEET METAL WORKER	K3.075	3.075	3.075	L3.0625	3.125	3.065	3.15	3.125	3.12	3.12	3.10	3.125	3.13
SPRINKLER FITTER	3.325	3.325	3.325				3.325	3.325	3.25				
STEAMFITTERS	3.20	3.425	3.425	3.25	3.30	3.25	3.30	3.425			3.34	3.34	3.30
TRACTOR OPERATOR	2.97	2.97	2.97	2.97	2.97	2.97	2.97	2.97	M2.77	M2.77	M2.77	M2.77	M2.77
TRUCK DRIVER—Dump trucks, under 4 yds.	2.225	2.225	2.225	2.225	2.225	2.225	2.225	2.225	N2.265	N2.265	N2.265	N2.265	N2.265
TILE SETTER	3.10	3.10	3.10	3.00	3.00	2.915	3.10	3.10	3.12		3.125	2.85	3.00

A $3.55 effective Sept. 1, 1955
B $2.90 effective Sept. 15, 1955
C $2.90 effective Oct. 15, 1955
D $2.95 effective Sept. 15, 1955
E $2.825 effective Sept. 15, 1955
F $2.65 effective Oct. 31, 1955
G $3.20 effective Nov. 1 1955
H $2.20 effective Sept. 15, 1955
I This is the metal furring lather rate, which increases to $3.625 effective Sept. 1, 1955. The rate for nail-on lathers is $3.375.
J $3.24 effective Oct. 31, 1955
K $3.15 effective Sept. 1, 1955
L $3.125 effective Nov. 1, 1955
M $2.86 effective Oct. 31, 1955
N $2.305 effective Sept. 15, 1955

ATTENTION: The above tabulation has been prepared by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research, and represents data reported by building trades councils, union locals, contractor organizations and other reliable sources. Corrections and additions are made as information becomes available. The above rates do not include payments to health and welfare, pension, administration, apprentice training or vacation funds. These supplements are shown in table 2. Payments made directly to the employee for such purposes are included in the hourly wage rates shown above.

Table 2—Employer Contributions to Health and Welfare, Pension, Vacation and Other Funds California Union Contracts, Construction Industry

CRAFT	San Francisco	Alameda	Contra Costa	Fresno	Sacramento	San Joaquin	Santa Clara	Solano	Los Angeles	San Bernardino	San Diego	Santa Barbara	Kern
ASBESTOS WORKER	9cw	9cw	9cw	9cw	9cw	9cw	9cw	9cw	10cw	10cw	10cw	10cw	10cw
BOILERMAKER	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
BRICKLAYER	10cw							10cw					
BRICKLAYER, HODCARRIER	7½cw	10cw	10cw		10cw	10cw		10cw			7½cw		
CARPENTER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CEMENT FINISHER	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
CONCRETE MIXER—Skip type (1-yd.)	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
ELECTRICIAN	7½cw	7½cw	7½cw		7½cw	7½cw		7½cw			10cw		7½cw
	1%P; 4%V	1%P; 4%V	1%P; 4%V	1%P	1%P	1%P; 4%V	1%P	1%P; 4%V	1%P		1%P	1%P	1%P
ELEVATOR CONSTRUCTOR	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6cw	6½cw	6½cw	6½cw	6½cw	6½cw
ENGINEER: MATERIAL HOIST	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
GLAZIER	7½cw	7½cw	7½cw		7½cw	7½cw	7½cw	7½cw	7½cw		7½cw		
	8½cv	8½cv	8½cv		5cv	5cv	8½cv	8½cv					
IRONWORKER: ORNAMENTAL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
REINF. STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw
STRUCTURAL STEEL	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw	7½cw

CONSTRUCTION INDUSTRY WAGE RATES---(Table 2 Continued)

LABORERS: BUILDING	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
CONCRETE	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw					
LATHER	7½cw		7½cw		10cw	10cw			$1 dayw	50c dayw	10cw		7½cw
MARBLE SETTER													
MOSAIC & TERRAZZO	7½cw												
PAINTER—BRUSH	8½cw	8½cw	8½cw	8cw 1_{CADM}	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PAINTER—SPRAY	8½cw	8½cw	8½cw	8cw 1_{CADM}	7½cw	8½cw	8½cw	10cw	8½cw		8cw	10cw	10cw
PILEDRIVER—OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
PLASTERER	10cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw	12½cw		10cw		7½cw
PLASTERER, HODCARRIER	7½cw	11cw	11cw	7½cw	10cw	10cw	7½cw	60c dayw ½%PROM	7½cw		10cw		7½cw
PLUMBER	11cw; $2½c_{JIB}$ 12½cv; $10c_P$	10cw 12½cv	10cw $1½c_A$	10cw; $1c_A$	10cw 12½cv	10cw $10c_P$; $1c_A$	10cw	10cw $1c_A$			10cw	10cw	10cw
ROOFER	7½cw 7½cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw 5cv	7½cw	7½cw 5cv	7½cw	8½cw	10cv		8½cw 10cv	7½cw 10cv
SHEET METAL WORKER	7½cw	7½cw 3¼cv	7½cw 3¼cv	7½cw 2%v	7½cw	7½cw	7½cw 7½cv	7½cw 4%v	8½cw 6½cv	6½cw 6½cv	8½cw	6½cw	8½cw 9cv
SPRINKLER FITTER	7½cw	7½cw	7½cw				7½cw	7½cw	7½cw				
STEAMFITTERS	11cw; $10c_P$ 12½cv; $2½c_{JIB}$	10cw $1c_A$	10cw $1c_A$	10cw $10c_P$; $1c_A$	10cw 12½cv	10cw $10c_P$; $1c_A$	10cw	10cw $1c_A$			10cw	10cw	10cw
TRACTOR OPERATOR	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw
TRUCK DRIVER—Dump trucks, under 4 yds.	10cw	10cw	10cw	10cw	10cw	10cw	10cw	10cw	7½cw	7½cw	7½cw	7½cw	7½cw
TILE SETTER	7½cw	7½cw	7½cw				7½cw	7½cw	2½%w ¼%PROM				

ATTENTION: **The above tabulation has been prepared and compiled by the State of California, Department of Industrial Relations, Division of Labor Statistics and Research from the latest available data reported by building trades councils, union locals, contractor organizations and other reliable sources. The table was prepared from incomplete data; where no employer contributions are specified, it does not necessarily mean that none are required by the union contract. Payments made directly to the employee and earmarked for vacations, health and welfare, etc., are not shown above but are included with the hourly wage rates shown in Table 1.**

The type of supplement is indicated by the following symbols: W—Health and Welfare; P—Pensions; V—Vacations; A—Apprentice training fund; Adm—Administration fund; JIB—Joint Industry Board; Prom—Promotion fund.

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CONSTRUCTION CONTRACTS AWARDED AND MISCELLANEOUS PERSONNEL DATA

INDUSTRIAL BLDG., Fullerton, Orange county. John D. Howard, Burbank, owner. Concrete block and stone veneer industrial building, laminated beams, composition roofing, concrete slab, plumbing, electrical, metal sash, wood overhead doors, gas wall heaters, asphalt tile flooring; 10,000 sq. ft. of area. ENGINEER: Quigley & Clark, Engineers and Architects, 43 Malaga Cove Plaza, Palos Verdes Estates.

TENNIS CLUB ADD'N., California Lawn Tennis Club, San Francisco. California Tennis Club, San Francisco, owner. 2-Story frame and stucco addition to present facilities. ARCHITECT: Clarence W. Mayhew, 251 Post St. GENERAL CONTRACTOR: Robert L. Wilson, 158 South Park, San Francisco.

FURNITURE STORE, Long Beach, Los Angeles county. Howard Latham, Long Beach, owner. 2-Story frame and stucco furniture store, built-up composition roofing, terrazzo, plyscore and carpet floors, tapered steel girders, pipe columns, lath and plaster interior, air conditioning, space heater, slim line light fixtures, roof ventilators, toilet facilities, plate glass, galvanized gutters and downspouts; 70x180 ft. ENGINEER: Harold E. Ketchum, Engineer, 3711 Cedar Ave., Long Beach. GENERAL CONTRACTOR: C. A. Miller, 6050 Gundry Ave., Long Beach.

MEDICAL-DENTAL BLDG., San Mateo. Dr. Straub, San Mateo, owner. 1-Story frame medical-dental building; 2-suites of offices and facilities — $55,675. ARCHITECT: Vincent G. Raney, 233 Post Street, San Francisco. GENERAL CONTRACTOR: Burroughs & Anderson, 918 Fleetwood, San Mateo.

8-UNIT APARTMENT, Long Beach, Los Angeles county. Albert L. Ward, Long Beach, owner. Frame and stucco, wood siding, 2-story, 8-unit apartment, composition and rock roof, oak and linoleum floors, plaster interior, metal casements and louvred sash, plate glass, louvred doors, dual wall heaters, insulation, ceramic tile-tub shower wainscot, pullmans and kitchen counter tops, sliding wardrobe doors, plywood kitchen cabinets, cement stair and balcony, wrought iron railing, grape stake fencing, stone veneer; 7000 sq. ft. in area — $50,000. ARCHITECT: Raymond A. Sites, Farmers and Merchants Bank Bldg., Long Beach.

OFFICE BLDG., Napa. Kaiser Steel Corpn., 1924 Broadway, Oakland, owner. 1-Story concrete block and frame office building; 6000 sq. ft. in area — $62,718. ARCHITECT: Beland & Gianelli, 1903-A Sonoma Ave., Vallejo. GENERAL CONTRACTOR: J. H. Nienopp, 2400 Oak St., Napa.

CENTRAL FIRE STATION, Antioch, Contra Costa county. City of Antioch, Antioch, owner. Construction of a new central fire station — $130,000. ARCHITECT: Confer & Willis, 366 40th St., Oakland.

GREYHOUND BUS DEPOT, San Jose, Santa Clara county. Greyhound Bus Lines, Inc., San Francisco, owner. 1-Story reinforced concrete Greyhound bus depot, waiting room, air conditioning, structural steel canopy loading platform, coffe shop; 115x245 ft. — $600,000. ARCHITECT: Skidmore, Owings & Merrill, 1 Montgomery St., San Francisco. GENERAL CONTRACTOR: Nielsen & Nielsen, 1071 West Wood, San Jose.

BANK BLDG., Sonoma. Bank of America, 300 Montgomery St., San Francisco, owner. 1-Story mezzanine, concrete block and frame construction, tile and composition roofing — $158,968. ARCHITECT: Continental Service Co., Flood Bldg., San Francisco. GENERAL CONTRACTOR: C. H. Smythe, P. O. Box 207 Lakeport.

BALLISTIC MISSILE FACILITY, San Diego. Convair Division, General Dynamics Corpn., San Diego, owner. 1-Story high-bay manufacturing building; 2-connected six-story office buildings; 1-engineering laboratory bldg.; cafeteria-auditorium; instrument and computer center; and other special purpose test and utility buildings; 1,000,000 sq. ft. of area in all structures — $20,000,000. ARCHITECTS: Pereira & Luckman, Los Angeles. GENERAL CONTRACTOR: McNeil Const. Co., Los Angeles.

ACADEMIC BLDGS., Air Force Academy, Colorado Springs, Colorado. Contract Branch, Legal & Contracting Division, Air Force Academy Construction Agency, Colorado Springs, Colorado, owner. Construction contract for Complex Buildings, except foundation caissons and structural steel — $19,400,000. GENERAL CON-

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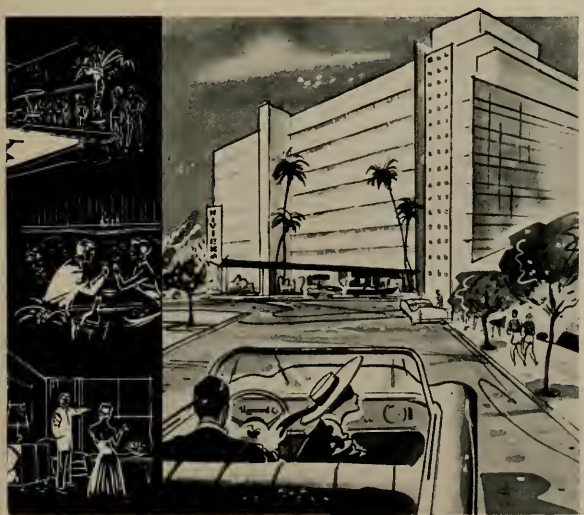

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LABOR TEMPLE, AFL-CIO, Stockton, San Joaquin county. Operating Engineers Union, San Francisco, owner. 1-Story structural steel and wood frame, stucco, mosaic veneer paneling; 23,000 sq. ft. of area; facilities for offices, club rooms, meeting rooms, cafe, auditorium to seat 300 persons—$216,000. ARCHITECT: Mayo, Johnson & DeWolf, Exchange Bldg., Stockton. GENERAL CONTRACTOR: Marshall Development Corpn., 25 Victor Park Lane, San Mateo.

MOTEL, Ukiah, Mendocino county. 2-Story frame and stucco construction; 42 units, dining room, cocktail lounge, swimming pool — $170,500. ARCHITECT: Frank O. Merwin, 716 Montgomery St., San Francisco. GENERAL CONTRACTOR: Robt. R. Todd, 915 Beaver, Santa Rosa.

NEW ELEMENTARY SCHOOL, Yuba City, Sutter county. Central Gaither Elementary School District, Yuba City, owner. Facilities include 8 classrooms, kindergarten, multi-purpose unit, kitchen, toilet rooms—$255,000. ARCHITECT: Gordon Stafford, 1024½ J St., Sacramento. GENERAL CONTRACTOR: Pacific Co., 801 Cedar St., Berkeley.

SAVINGS & LOAN BLDG., Modesto, Stanislaus county. Stanislaus-Merced Savings & Loan Association, Modesto, owner. — $142,000. ARCHITECT: James P. Lockett, 121 E. Main, Visalia. GENERAL CONTRACTOR: Delphia & Shadle, 200 N. 3rd St., Patterson.

CAR WASH BLDG., Pasadena, Los Angeles county. Capsa Enterprises, Pasadena, owner. Metal car wash building, concrete slab, all metal construction; 9000 sq. ft. area; asphaltic concrete paving, colored concrete, office and waiting room, toilets, steel decking—$40,000. ARCHITECTS: Smith & Williams, 204 S. Los Robles, Pasadena. GENERAL CONTRACTOR: Roulac Co., 622 Lake Ave., Pasadena.

GYMNASIUM, East Campus, Contra Costa Junior College, Concord, Contra Costa county. Contra Costa Junior College, Martinez, owner. Reinforced concrete, structural steel roof trusses, wood roof deck, concrete floors, maple flooring, acoustical tile ceilings—$297,000. ARCHITECT: Donald L. Hardison, 225 Broadway, Richmond. GENERAL CONTRACTOR: F. P. Lathrop Const Co., 806 Hearst Ave., Berkeley.

SANCTUARY, North Hollywood, Los Angeles county. Emmanuel Lutheran Church of North Hollywood, owner. Concrete block construction, 182x95 ft., composition roofing, concrete slab, asphalt tile, terrazzo, carpeted and rubber tile floors, acoustical plaster, steel beams, aluminum sash and glass louvers, hot water heating system; seating capacity 950 persons. ARCHITECT: Orr, Strange & Inslee, 3142 Wilshire Blvd., Los Angeles. GENERAL CONTRACTOR: Thos. Lunde, 11223 Delano St., North Hollywood.

PHYSICS BLDG., Stanford University, Palo Alto. Board of Trustees, Stanford University, Palo Alto, owner. 1-Story reinforced concrete construction — $465,948. ARCHITECT: Gardner A. Dailey, 442 Post St., San Francisco. GENERAL CONTRACTOR: Williams & Burrows, 500 Harbor Blvd., Belmont.

OFFICE BLDG., Stanton, Orange county. Stanton County Water District, Stanton, owner. Office building for the water district—$15,873. ENGINEER: Boyle Engineering Co., 331 Spurgeon Bldg., Santa Ana. GENERAL CONTRACTOR: E. A. Noe & Son, 530 S. Santa Clara Ave., Santa Ana.

SHOPPING CENTER, Claremont Village, Belmont, San Mateo county. Claremont Village Shopping Center, Menlo Park, owner. 1-Story ranch type frame construction, shake roof, concrete floor; 80,000 sq. ft. area—$750,000. ARCHITECT: Peter Kump, 1075 Curtis St., Menlo Park. GENERAL CONTRACTOR: Wm. Roth, Jr., P. O. Box 827, Belmont.

INDUSTRIAL BLDG., Los Angeles. Irene Barnes, Los Angeles, owner. Reinforced brick, laminated arches, composition roofing, concrete slab, plumbing, electrical, drywall interior, asphalt paving; 7000 sq. ft. area. ENGINEER: David T. Witherly, 7233 Beverly Blvd., Los Angeles. GENERAL CONTRACTOR: Carpenter & Smallwood, 3838 W. Santa Barbara Ave., Los Angeles.

HIGH SCHOOL ADD'N., Central High, Fresno. Central Union High School District, Fresno, owner. Addition of 4 classrooms, covered passageway, toilet rooms —$64,015. ARCHITECT: Walter Wagner & Partners, 1830 Van Ness St., Fresno. GENERAL CONTRACTOR: Hopkins & Son, 5774 S. Elm St., Fresno.

I.B.M. OFFICE, Fresno. Dr. John R. Hoop, Fresno, owner. 1-Story masonry office building to be occupied by I.B.M.; 4000 sq. ft. of area; off street parking facilities—$40,000. STRUCTURAL ENGINEER: H. Wayne Taul, 171 No. Van Ness, Fresno.

NEW ELEMENTARY SCHOOL, Norbridge, Castro Valley, Alameda county. Castro Valley Elementary School District, Castro Valley, owner. Frame and stucco construction; 7 classrooms, kinlergarten, multi-purpose rooms, kitchen, toilet rooms —$239,229. ARCHITECT: Lillis & Smith, 912 Tennessee St., Vallejo. GENERAL CONTRACTOR: Wallace Webb & Son, 1772 "B" St. Hayward.

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IN THE NEWS

HERMAN GUTTMAN NAMED PARTNER

Herman Guttman, Los Angeles, has been named a partner of the architectural firm of Victor Gruen & Associates, according to a recent announcement by the firm.

He has been with the firm since 1946.

BUSINESS EDUCATION BLDG. AT SANTA ROSA

Architect J. Clarence Felciano, 4010 Montecito Ave., Santa Rosa, is preparing plans and specifications for the Santa Rosa Junior College District for construction of a frame and stucco Business Education building at the Santa Rosa Junior College.

Facilities will include 9 classrooms, offices and toilet rooms.

COWELL HOSPITAL BERKELEY ADD'N

The University of California, Board of Regents, has authorized a grant of $80,000 for preparation of plans and specifications for construction of a 4-story addition to the Cowell Memorial Hospital on the University of California, Berkeley campus.

Funds for the preliminary work will come from the S. H. Cowell Foundation. Estimated cost of the hospital addition has been set at $1,500,000.

NEW CHURCH AND SUNDAY SCHOOL

Architect Leslie I. Nichols, 454 Forest Ave., Palo Alto, is working on drawings for construction of a new Church building on Ravenswood Ave., Menlo Park. The new building will also contain administration facilities and a Sunday School area.

Of frame and stucco construction, it will provide seating for 500 persons.

EXTENSIBLE HOLE SAW

A new type hole saw that will cut 2½" diameters to depths up to 9" is introduced by the Midget Louver Co.—Supplied in three different lengths—1", 2½" and 5" depths (which cut to depth of 9" by removing a slug).

Saws are designed for use with average ½" electric drills; exclusive flange-type locking mechanism permits 5 second interchangeability of saws and requires no tools, screws or bolts. Saw contour and set designed to eliminate binding; scientifically hardened teeth are cut into rigid tubular body, assuring ruggedness plus fast, easy cutting. Complete details and prices, Midget Louver Co., 6 Wall Street, Norwalk, Conn.

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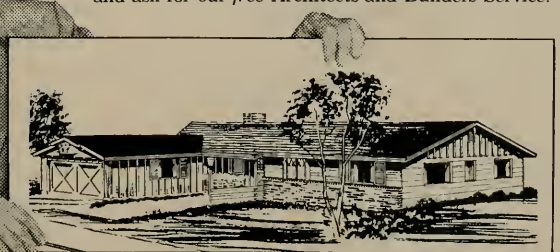

Specify built-in telephone facilities —a sign of good planning

Pacific Telephone

ODD FELLOWS LODGE

The architectural firm of Hale & Jacobsohn, L & V Terminal, Centerville, is drafting plans and specifications for construction of a 1-story concrete block, 4800 sq. ft. in area, Odd Fellows Lodge to be built in Rodeo, Contra Costa county.

LOS ANGELES AIRPORT PLANNERS HEADQUARTERS

Headquarters for the architects and engineers who are developing plans for the new Los Angeles International Airport have been set up at 8480 Beverly Blvd., Los Angeles.

Pereira & Luckman co-ordinating architects for the venture, with Welton Becket & Associates, and Paul R. Williams will utilize a 8000 sq. ft. office and drafting area at the Beverly address where more than 45 persons will be employed on the planning, architectural and engineering phases of the project which will be financed through a recently approved $59,700,000 bond program.

The new terminal will cover 228 acres west of Sepulveda and Century Blvds., an area five times that of the present terminal space which will be converted into freight and air mail operations.

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LOCKHEED PLANT FOR SUNNYVALE

The Lockheed Aircraft Corporation recently announced it would construct manufacturing facilities on a site acquired in Sunnyvale, and according to R. A. Bryant, Jr., firm representative, plans for construction of the new facilities are being prepared.

The engineering firm of Hall, Pregnoff & Matheu, Structural Engineers, 251 Kearny St., San Francisco; Paul J. Huston, architect, 663 Cowper St., Palo Alto; the firm of Keller & Gannon, Mechanical and Electrical Engineers, 126 Post St., San Francisco; and Lawrence G. Brian, Civil Engineer, 1526 Main St., Redwood City, are working on details of the 1-stry, 96,000 sq. ft., reinforced concrete tilt-up, rigid steel frame, gypsum roof deck, some field stone veneer building.

NEW BANK FOR MERCED

The architectural firm of Walter Wagner & Partners, Thorington Bldg., Merced, has completed drawings for construction of a 1-story, with mezzanine, bank building to be built in Merced for the First Western Bank & Trust Company of San Francisco.

The new building will be of reinforced concrete and frame construction, will contain some 10,000 sq. ft. of area, and will provide facilities for 2 drive-in teller windows.

NEW SHOWERMASTER CONTROL SHUTOFF

A built-in volume control and shutoff is an exclusive feature of the new Showermaster control unit; encased in smart, modern chrome panel. It is a complete, self-contained thermostatic control for individual showers in homes, hotels, motels, schools, hospitals or clubs.

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FULLERTON SUNDAY SCHOOL BUILDING

Architect Everett L. Child, and Structural Engineer Ralph S. McLean, 1424 N. Spadra Rd., Fullerton, have completed plans and work has started on construction of a 2-story frame and stucco Sunday School building in Fullerton for the St. Andrews Episcopal Church.

The new building will have a composition roofing, concrete slab and wood sec-

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ond floor, stucco interior, acoustical plaster ceiling, fireplace, barbecue, wall heaters, steel sash, toilet partitions, concrete patio, 13 rooms and toilet facilities.

NEW SCREED PAD IS ANNOUNCED

A screed pad which has proven to many contractors that it is a most effective and economical way to screed concrete surfaces, over steel pans, old concrete surfaces and over a paper membrane without piercing the paper, is being introduced by the C. & H. Specialties Co., Berkeley, California.

This screed pad has been successfully used on many types of concrete floors and architects are invited to write for information regarding the product and other labor saving devices, made by the C. & H. Specialties Company, 909 Camelia St., Berkeley 6, Calif.

NEWARK BRASS MILL FACTORY PLANNED

The Titan Metal Mfg. Co. of Bellefonte, Pa., announced they would soon build a 1-story, 82,000 sq. ft. structural steel frame and reinforced concrete brass mill-factory in Newark, Alameda county.

The Rosendahl Corp., 100 Bush St., San Francisco, have been named the Engineers for the project. Garretson & Elemendorf, 417 Market St., San Francisco, will serve as Consulting Engineers; and Dames & Moore, 340 Market St., San Francisco, are the Soil Engineers.

LIBRARY AND SHOPS

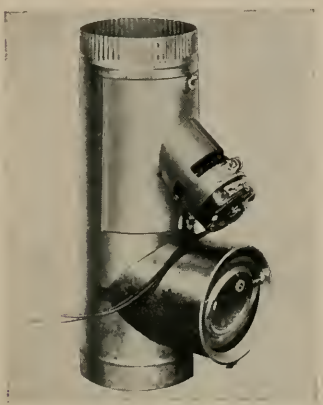
Architect Roy Donley, 8810 Melrose Ave., Los Angeles, is preparing drawings for construction of a library and maintenance shops in Torrance for the Torrance Unified School District.

The library will be of steel frame and brick wall construction, 18,000 sq. ft. area, 2-story, concrete slab, wood and vinyl tile floors, steel sash, plumbing, electrical, forced air heating, composition roof, wood roof construction, acoustic tile ceilings.

The shops will be pre-fabricated steel construction, 20,000 sq. ft. area, composition roofing, concrete slab gasoline pump, repair shop equipment, wood working equipment, and offices.

COMBINATION DRAFT INDUCER REGULATOR

An attractively priced combination draft inducer-regulator, developed and marketed by the Walker Mfg. and Sales Corpn.; is adaptable to oil, gas, stoker and hand fired installations. This compact combination unit promises low-cost correction for almost any type of draft difficulty. Corrects troubles caused by poor chimney construction.



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NEW AIRPORT TERMINAL BLDG.

Architects Vhay & Grow, 131 W 2nd St., Reno, Nevada, have been commissioned by the City of Reno, to draft plans

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and specifications for construction of a new airport terminal building at the Reno Municipal Airport.

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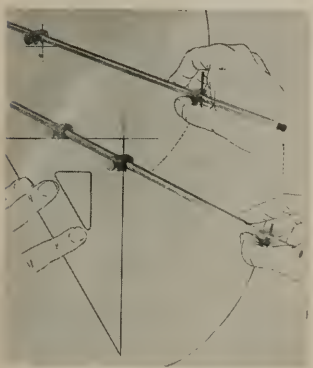

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BONDS FOR CITY HALL

Architect Albert W. Kahl, 1200 7th Ave., San Mateo, is preparing plans for construction of a new 1-story brick block and frame City Hall to be built in Millbrae for the City of Millbrae.

Bonds in an amount of $174,000 have been approved by voters of the city.

JOCKEY CLUBHOUSE

Architects Hale & Jacobsohn, F. & V. Terminal, Centerville, are preparing drawings for construction of a Jockey Clubhouse at the Pleasanton Fairgrounds for the County of Alameda. Cost of the project is $60,000.

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